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ABSTRACT

The activities included in the Curriculum for Environmental Education of the Disabled (CEED) are based on current best-practices in the area of pollution prevention and address the following major areas: recycling, water and energy efficiency, transportation, citizenship, and outdoor appreciation. The activities emphasize the development of independent life skills that enable disabled students to contribute to and participate in their communities and function responsibly in the home environment. Each objective in the CEED has a corresponding Instructional Activity Profile which includes a list of relevant activities by developmental level. In addition to a complete description of each activity, the Instructional Activity Profile also provides a statement of the objective, curriculum correlation, environment where the activity might be performed, materials needed, key vocabulary words, possible alternative applications or "extensions" for the activity, and a list of resources. Contains 58 references. (DDR)

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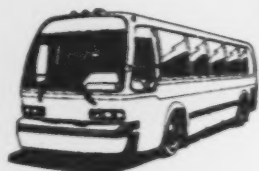


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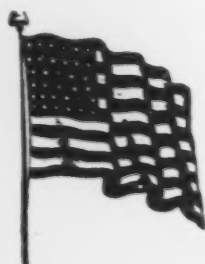
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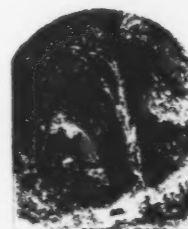
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Curriculum for Environmental Education of the Disabled (C.E.E.D.)



Davidson School
Elwyn Inc.



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Dear Educator:

The Davidson School of Elwyn, Inc., an Approved Private School for Special Education, has invested its resources in conjunction with a grant from the Environmental Protection Agency to develop this curriculum. This publication is the culmination of a yearlong collaborative effort among a core group of Elwyn/Davidson School teachers and two environmental advisers. We designed the process to draw on the strengths of all involved. The teachers have provided creative and practical insights in the development of specific activities that will interest their students. The environmental advisers have shared their expertise on specific topics and resource materials during work sessions.

The group of teachers and environmental advisers was divided into teams and each team was responsible for the development of a major section: recycling, water and energy efficiency, transportation and outdoor appreciation. The teams met regularly to review existing curricular materials and to prepare the specific activities. Emphasis was placed on pursuing activities that are teacher friendly and appropriate for the developmentally disabled. Most of the activities require materials that are readily available in the classroom or can be brought in from home.

The process of developing these materials has been a valuable one for us all. It has reminded us about the environmental impact of the decisions we make and the way we live our lives. Individuals with developmental disabilities are able to make significant contributions towards pollution prevention through their own personal actions. We hope that these curricular materials will serve as an important step in teaching these concepts to your students.

The magnitude of the environmental issues we all face is great. At the same time, I encourage you and your students to have fun with the activities. Recycling, riding on mass transportation and a nature walk can all be enjoyable experiences, while also being environmentally friendly.

So we hope you enjoy these materials and please share with us your experiences in using this publication.

Sincerely,

Stephen Shaud

Stephen Shaud
Lead Vocational Teacher
C.E.E.D. Coordinator

Contents

General Introduction

Section 1. Recycling

Introduction

Objective a: Identify recyclable materials (glass, paper, aluminum) vs. trash.

Objective b: Identify appropriate receptacles for recyclables.

Objective c: Sort and separate various recyclable materials into appropriate receptacles.

Objective d: Identify materials which can be re-used and their uses.

Objective e: Discriminate between non-toxic materials and potential toxins in household products.

Objective f: Identify alternative household products that are non-toxic.

Section 2. Water and Energy Efficiency

Introduction

Objective a: Demonstrate water-saving habits; example: turning on water only when needed (during toothbrushing, shaving, washing dishes).

Objective b: Demonstrate efficient use of appliances and lights; example: turn off when not in use.

Objective c: Demonstrate seasonally appropriate energy conservation practices.

Section 3. Transportation

Introduction

Objective a: Identify the benefits of using public transportation and/or car pooling.

Objective b: Use public transportation for school trips, commuting to and from work and for personal needs.

Objective c: Identify the benefits to the environment of driving a well-maintained car.

Section 4. Citizenship

Introduction

Table of Correlation of Activities

Section 5. Outdoor Appreciation

Introduction

Objective a: Demonstrate an appreciation for natural environments by participating in hikes, plant and animal identification and environmental beautification.

Objective b: Participation in active ongoing litter prevention campaigns and clean-up (examples: Philapride, Anti-Graffiti Network).

(Some of the objectives above have been shortened on the Activity Plans due to space considerations and may not appear exactly as printed above.)

Bibliography

Indexes

General Introduction

The concept of this curriculum was developed in response to the lack of any existing curricular materials that specifically address the needs of the developmentally disabled learner in the field of environmental education. Students with disabilities have traditionally received instruction on the environment in isolated units or using materials that have been adapted or watered down from regular science education materials or regular environmental education curricula. This manner of instruction has been deficient in uniformity, consistency, and purposeful execution in attempting to foster environmentally conscious practices in the daily lives of students with disabilities. Given that these students comprise a significant portion of the general population (according to the U.S. Department of Education, 10% of all students nationwide have special needs), environmentally responsible actions on their part could contribute meaningfully to pollution prevention efforts in relation to the strategy developed by the EPA for pollution prevention in the consumer sector. This strategy states:

"Virtually every aspect of an individual's life has an effect on the environment and could potentially be considered in a pollution prevention strategy for the consumer sector. This includes an individual's direct and indirect purchases of products and services; participation in recycling programs; community involvement; and lifestyle decisions involving housing, transportation, work location, energy consumption, and vacations and leisure activities."

The Curriculum for Environmental Education of the Disabled (C.E.E.D.) activities are based on current best-practices in the area of pollution prevention and address the following major areas: Recycling, Water and Energy Efficiency, Transportation, Citizenship, and Outdoor Appreciation. Implicit in these five areas are the mutual priorities of both the educational system and the EPA to develop citizens who are able to take actions and demonstrate behaviors that show personal accountability in caring for the environment. The activities also emphasize the development of independent life skills that enable disabled students to contribute to and participate in their communities and function responsibly in the home environment. It is hoped that this curriculum will give teachers and others who work with developmentally disabled individuals a practical and useful means to achieve these goals.

Instructional Activity Profile

Each objective in the C.E.E.D. has a corresponding Instructional Activity Profile. This Profile contains a list of the activities associated with that objective in order of their developmental level, with level A being the most concrete and level D being the most abstract. This Profile gives the reader the opportunity to see all of the activities for an objective at a glance.

Instructional Activity Plan

The Instructional Activity Plan gives a complete description of each activity listed in the Instructional Activity Profile. It also provides:

- a statement of the objective
- the name of the activity
- the name of the Domain and Goal Areas of the Davidson School Life Skills Curriculum to which it correlates
- the level
- the environment where the activity might be performed
- materials needed
- key vocabulary words
- possible alternative applications or "extensions" for the activity
- a list of resources the teacher may wish to consult for further information or similar activities.

The Resource Guide lists only the title of relevant books. For more complete information about each entry, please consult the "Bibliography / Further Reading Section" of this book.

Correlation of C.E.E.D. Objectives with the Davidson School Life Skills Curriculum

On each activity sheet are listed "Domain" and "Goal Area." These two items refer to sections of the Davidson School Life Skills Curriculum and are given so that each C.E.E.D. activity may be correlated with the curriculum area that the classroom teacher wishes to address. A complete list of the Life Skills Curriculum's Domains and Goal Areas is given below. This list covers the major sections that are included in most life skills curricula in use with developmentally disabled students and can be used as a reference point for teachers from other schools so that they may correlate the C.E.E.D. activities with their own curricula. A list of activities based on Domain and Goal Area may be found in the index. The Davidson School Life Skills Curriculum consists of the following areas:

Curricular Domains and Goal Areas

<u>Domain</u>	<u>Goal Area</u>	<u>Domain</u>	<u>Goal Area</u>
Personal Maintenance	Assisted Eating Skills	Functional Academics	Sight Reading
	Independent Eating Skills		Word Analysis
	Toileting		Comprehension
	Dressing		Writing
	Grooming		Math-computation
Domestic Maintenance	Health Care		Measurement
		Reasoning/ Consequencies	Calendar
	Grocery Shopping		Time
	General Shopping		Money
	Food Handling		Telephone
	Use of Tools and Appliances		
	Cooking	Vocational Skills	Job Search & Awareness
	Meal Preparation		Work Habits
	After-Meal Clean-up		Janitorial
	Cleaning Skills		Manipulation, Assembly & Packaging
Recreation and Leisure	Laundry, Serving & Mending		Use of Tools & Equipment
	Gardening		Stock & Warehouse
	Home Maintenance		Office & clerical
			Food Service
	Spectation Activities		Customer Service
General Community Functioning	Game Activities	Interpersonal Communication	Automotive
	Individual Sports		Household Repair
	Hobbies		Clothing Repair
	Papicol Fitness		Groundskeeping
	Team Sports		
	Travel		Respond to Environment
	Community Safety		Respond to Others
	Using Community Services		Follow Directions
	Dining Out		Responsibility for Self
			Initiating Interaction
			Indicating Preferences

Recycling



Recycling: Introduction

The disposal society phenomenon began in our country during the post war years of the 1950s. During this time, more and more products were designed to have limited life spans. This planned obsolescence practice has become widely accepted in our consumer society. Products ranging from small items such as razors to larger more expensive appliances become part of our municipal solid waste stream rather than being repaired, reused or remanufactured.

The increased use of packaging since the 1950s has also significantly contributed to the amount of waste that we produce. Packaging serves more than just protection of products, it also is specifically designed to sell products. Packaging costs about 10% of our grocery budgets¹ and becomes about 50% of the nation's household waste by volume.² The volume of trash has grown 80% since 1960 with the average person now producing four to five pounds of trash each day, an amount greater than any other country in the world. In other industrialized nations, the amount of trash produced per person per day ranges from 1.8 pounds in Japan to 2.2 pounds in West Germany and Switzerland.³

The ever growing amount of municipal solid waste posed serious problems throughout the country during the 1980s. Municipal solid waste includes waste from households, the commercial sector, institutions and light industry. Solid waste officials faced the dilemma during the 1980s that more than 70% of the waste was going to landfills and more than one-third of those landfills were expected to be full within coming years.⁴ The siting of new landfills and incinerators was difficult because of community opposition. Citizens were concerned about water pollution from landfills, air pollution from incinerators and heavy truck traffic from both. Disposal fees increased as hauling costs, costs for higher standards of landfills and labor costs all increased.

In response to the trash crisis, many states passed legislation requiring waste management program planning including (1) source reduction of the amount and toxicity of the waste generated; (2) recycling and reuse and (3) waste combustion and landfills with higher environmental standards.

Recycling has been included in the state solid waste management legislation throughout the country. Recycling legislation often includes provisions for collection, processing and marketing of recycled materials. Also, many states have legislation that encourages or requires the government purchase of recycled content materials in order to strengthen the markets for the collected materials.

Recycling goals and mandates vary from state to state. Some states require municipalities to provide curbside collection of recycled materials for their citizens. Other states provide a network of drop off centers where citizens can leave their recycled materials in recycling bins.

As a result of these efforts, there are now more than 6,000 curbside collection programs in the country. In addition, there are thousands more drop off, buy-back,

office and commercial recycling programs.⁵

Twenty-one percent of the total US municipal solid waste was recycled in 1992.⁶ The following are the recovery rates for the materials that are most commonly collected in household recycling programs.⁷ The recovery rate represents the percentage of a material that is recycled based on the total amount of that material in the waste stream. For example, 57.9% of the newspaper in the waste stream in 1993 was recovered for recycling.

Material	1993 Rate
Newspapers	57.9%
Aluminum beverage cans	63.1%
Glass Containers	35.0%
Steel Cans	48.0%
PET containers	30.0%

Many recycling programs are initiating backyard composting programs or are collecting yard waste for composting because yard waste comprises 18% of the municipal solid waste stream and is such a significant portion of the waste stream.

After a material is collected for recycling, it must be processed so that it can meet the requirements of the end user manufacturer. For instance, many communities collect "commingled" containers which means that residents may place a mix of containers made of different materials (i.e. aluminum, steel, glass, plastic) in a common recycling bin for collection. The commingled containers are taken to a processing facility where they are separated by material and in the case of glass, by color, and then crushed, flaked, or baled for shipment to the manufacturer that will use the material to make new products.

The processing phase is critical in ensuring that the end user has the quality of materials free of contaminants that is necessary in the manufacturing process. There are vocational opportunities for individuals with disabilities in recycling processing facilities. For instance, the Madison Chapter/NYSARC owns and operates a material recovery facility that processes all the recycling materials collected by the county. The employees help sort materials and prepare them for market. *The Elwyn Recycling Venture* conducted in 1993 identified thirty recycling ventures throughout the country that employ people with disabilities.

Using these Materials

As background for using these materials in the classroom, it is important to be knowledgeable about the recycling policies and practices in your community. What is your state's recycling policy? Does your municipality provide a recycling program in the form of curbside collection, drop off or buy back centers? Does your school have a recycling program?

The activities in this section will be best used if they are adapted to be consistent with existing recycling programs that students can participate at home or school. Sections A - C focus on teaching students how to identify recycling materials

and then how to prepare them and place them in appropriate recycling receptacles. Section D concentrates on activities demonstrating how materials can be reused. In Sections E and F the focus is on the use of non-toxic household products.

In all the sections, the activities are sequenced from lower functioning to higher functioning levels. You may want to use all the activities in sequence or you may want to pick and choose activities and combine them when appropriate.

C.E.E.D. Instructional Activity Profile

Recycling 1a

- A-1 Be able to identify newspapers when directed.
- A-2 Be able to identify metal cans when directed.
- A-3 Be able to identify beverage bottles when directed.
- A-4 Be able to identify glass jars when directed.
- A-5 Be able to identify plastic dairy jugs.

- B-1 Be able to separate glossy inserts from newspapers.
- B-2 Be able to separate aluminum from steel cans.
- B-3 Be able to separate glass from plastic beverage bottles and dairy jugs.

- C-1 Be able to separate various colored glass beverage bottles.
- C-2 Be able to separate PET from HDPE bottles.
- C-3 Be able to separate white from colored and fax paper.
- C-4 Be able to separate magazines from other papers.

- D-1 Be able to separate leaves from miscellaneous trash.
- D-1 Be able to identify plant food matter.
- D-1 Be able to identify animal food matter.
- D-1 Be able to separate animal from plant food matter.

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a

C.E.E.D. Objective: Identify recyclable materials vs. trash

Instructional Activity "In the News"

Level A-1

Domain Vocational

Goal Area Sorting

Objective To identify newspapers from among a variety of paper & non-paper items.

Procedures -- Collect on a table top a variety of paper and non-paper materials. -- Point out distinguishing features of newspapers. -- Ask students to identify newspaper. -- Explain to students that newspapers separated from other papers can be recycled.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Several newspapers (local and national) Suggested other materials: letter on white stationery, magazines, pieces of colored paper, piece of aluminum foil, fabric, sheet of plastic
	Vocabulary Newspaper Recycling
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Have students bring in an assortment of papers from home or just the newspapers to be used for this activity.	Resource Guide The Recycler's Handbook Reclaim, Recycle, Reuse Complete Guide to Recycling at Home.

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a

Level A-2

C.E.E.D. Objective: Identify recyclable materials vs. trash.

Domain Domestic Maintenance

Instructional Activity "Do the Can-Can"

Goal Area Grocery Shopping

Objective To identify metal cans from among a variety of containers and other items.

Procedures -- Collect on a table top an assortment of containers and miscellaneous items. -- Point out distinguishing features of metal cans. -- Ask students to identify metal cans. -- Explain to students that metal cans can be recycled.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Several aluminum and steel cans (soda, food, pet food) Suggested other materials: glass soda bottle, plastic soda bottle, steel can, aluminum foil, tupperware container, paper cup
	Vocabulary Metal Aluminum Steel Recycling
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Visit a recycling center that accepts aluminum and steel cans. -- Visit a can manufacturing plant.	Resource Guide Recycled: The Mobius Curriculum The Recycler's Handbook Reclaim, Recycle, Reuse

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a

C.E.E.D. Objective: Identify recyclable materials vs. trash.

Instructional Activity "The Real Thing"

Level A-3

Domain Domestic Maintenance

Goal Area Grocery Shopping

Objective To identify beverage bottles when directed.

Procedures -- Gather together on a table top an assortment of plastic beverage bottles and other items. -- Point out distinguishing features of plastic beverage bottles (clearness, textures, crush ability). -- Ask students to identify beverage bottles. -- Explain to students that beverage bottles can be recycled or reused.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Several glass and plastic beverage bottles of different colors and sizes Suggested other materials: drinking glasses made from glass and plastic; metal soda cans; milk cartons; plastic dairy jugs Vocabulary Glass Plastic Beverage bottles
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Show some ways that plastic beverage bottles can be reused (as bag holder by cutting a hole, making a bird feeder by cutting in half; use as a water bottle in refrigerator.	Resource Guide Let's Reduce and Recycle The Recycler's Handbook Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity: "But I Can't See Through You"

Level: A-4
Domain: Domestic Maintenance
Goal Area: Grocery Shopping

Objective: Be able to identify glass food jars when directed.

Procedures -- Collect on a table top an assortment of glass food jars and other containers. -- Points out distinguishing features of glass food jars -- show examples of jars with and without food (peanut butter, jelly, tomato sauce). -- Ask students to identify glass food jars from the collection. -- Explain that glass food jars can be recycled or reused. Drinking glasses cannot.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Glass food jars (with & without food) Suggested other materials Drinking glasses made from glass and plastic Metal soda cans Milk carton Plastic dairy jug
	<u>Vocabulary</u> Glass food jar Drinking glasses Recycling
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Show how glass food jars can be reused to store other food items in (liquids in refrigerator: soups, sauces, juices) or dry goods in a cabinet (nuts, beans, etc.) 20	<u>Resource Guide</u> Complete Guide to Recycling at Home Recycler's Handbook Reclaim, Recycle, Reuse 21

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "Contented Cows"

Level A-5
Domain Domestic Maintenance
Goal Area Grocery Shopping

Objective Be able to identify dairy jugs when directed.

Procedures -- Collect on a table top an assortment of plastic dairy jugs, plastic and glass bottles and other containers. -- Point out distinguishing features of dairy jugs (shape, color, texture). Can contain milk or water. -- Ask students to identify dairy jugs from the collection. -- Explain that dairy jugs are made from a type of plastic that can be recycled and that they can be reused.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Plastic dairy jugs Suggested other materials: plastic and glass bottles, milk cartons, metal soda cans
	Vocabulary Dairy jug Plastic Recycling
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Show some of the ways you can reuse a plastic milk jug (as a water bottle in the refrigerator, making a bird feeder, cut bottom off and use as a base for plants, etc.) 22	Resource Guide Let's Reduce and Recycle Recycled: The Mobius Curriculum Recycler's Handbook 23

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling Ia
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "The Ad Man"

Level B-1
Domain Vocational
Goal Area Sorting

Objective Be able to separate glossy inserts from newspapers.

Procedures -- Collect a pile of newspapers with glossy inserts, hand one out to each student. -- Hold up a newspaper and take out glossy insert. -- Ask students to remove glossy inserts from their newspapers. -- Discuss distinguishing features (color, texture) and what inserts are for (advertising, selling products). -- Repeat exercise with students. -- Ask students to place newspapers in one pile and inserts in another at front of classroom. Explain that inserts from newspapers are made into other paper, and glossy inserts can be recycled with magazines.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Several newspapers with glossy inserts for each student Vocabulary Glossy insert Texture Advertising
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to practice removing glossy inserts from newspapers at home. 24	Resource Guide Recycler's Handbook Complete Guide to Recycling at Home 25

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "Magnetic Attraction"

Level B-2
Domain Vocational
Goal Area Sorting

Objective Be able to separate aluminum from steel cans.

Procedures -- Collect a variety of aluminum and steel cans. -- Show students a magnet explain that materials containing iron (including steel) are attracted to/stick to magnets. -- Use magnet to identify iron objects around the room. -- Give each student the chance to identify steel cans with a magnet from a collection of mixed cans. -- Explain that aluminum and steel cans must be separated before being made into new products.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Magnet/magnets Aluminum and steel cans Caution: Do not use magnet near computer
	<u>Vocabulary</u> Aluminum Iron Magnet Attract
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- As a reading activity, have students locate the recycling symbol on the label or the can itself and read and/or write the words "aluminum" or "steel." 26	<u>Resource Guide</u> Recycled: The Mobius Curriculum Recycler's Handbook Complete Guide to Recycling at Home 27

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "Will It Bounce or Will It Break?"

Level B-3
Domain Vocational
Goal Area Sorting

Objective Be able to separate glass from plastic beverage bottles and dairy jugs.

<u>Procedures</u> -- Collect an assortment of glass and plastic bottles. -- Hold up a glass bottle and discuss features (hard, breakable). -- Hold up a plastic bottle (of the same color) and discuss features (pliable). -- Let each student hold a glass bottle and a plastic bottle. -- Ask students to separate an assortment of bottles into two categories: glass and plastic. -- Explain that glass and plastic must be separated before being made in to new products.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors							
	<u>Materials/Preparation</u> Glass and plastic bottles and plastic dairy jugs of different colors							
	<u>Vocabulary</u> <table> <tr> <td>Glass</td><td>Breakable</td></tr> <tr> <td>Plastic</td><td>Pliable</td></tr> <tr> <td>Hard</td><td></td></tr> <tr> <td>Steel</td><td></td></tr> </table>	Glass	Breakable	Plastic	Pliable	Hard		Steel
Glass	Breakable							
Plastic	Pliable							
Hard								
Steel								
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Ask students to identify glass and plastic bottles at home. 28	<u>Resource Guide</u> Recycler's Handbook Let's Reduce and Recycle 29							

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a

C.E.E.D. Objective: Identify recyclable materials vs. trash.

Instructional Activity "Wearing of the Green (or Brown, or Clear)"

Level C-1

Domain Vocational

Goal Area Sorting

Objective Be able to separate various colored beverage bottles.

Procedures -- Collect an assortment of glass bottles. -- Hold up a bottle that is made from clear glass (<u>flint</u>). -- Hold up a bottle that is made from brown glass (<u>amber</u>). -- Hold up a bottle that is made from green glass. -- Ask students to separate glass bottles into the three categories (clear, brown, green). -- Explain all of these bottles can be recycled especially if separated by color.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Glass bottles Clear Brown Green Vocabulary Clear (flint) glass Brown (amber) glass Green glass
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Visit a recycling center or an area in the community that has recycling "igloos" that are color coded for clear, brown or green glass. -- Collect bottles and take them to the center.	Resource Guide Let's Reduce and Recycle Recycler's Handbook 31

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a

C.E.E.D. Objective: Identify recyclable materials vs. trash.

Instructional Activity "One is the Loneliest Number"

Level C-2

Domain Vocational

Goal Area Sorting

Objective Be able to separate PET from HPDE bottles.

Procedures -- Collect an assortment of plastic bottles and dairy jugs. -- Explain that plastic soda bottles are usually made from a plastic (resin) called PET and may have a #1 code on the bottom. -- Also explain that plastic dairy jugs are usually made from a plastic (resin) called HPDE and may have a #2 code on the bottom. -- Ask students to separate plastic soda bottles (PET) from dairy jugs (HPDE). -- Explain that both types of plastics can be recycled.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Beverage bottles (made from PET) Dairy jugs (made from HPDE)
	Vocabulary PET plastic HPDE plastic
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to identify PET and HPDE plastic bottles at home. -- Have them sort only by reading the #1 or the #2 on the bottom, not just by appearance of the bottle.	Resource Guide Let's Reduce and Recycle Recycler's Handbook Recycled: the Mobius Curriculum

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "Paper, Paper Everywhere"

Level C-3
Domain Vocational
Goal Area Sorting

Objective Be able to separate white from colored and thermofax paper.

Procedures -- Collect an assortment of paper. -- Hold up each paper and ask students to distinguish between the white and colored paper. Make two piles. -- Hand out one sheet of white office paper and one sheet of thermofax paper to each student. -- Explain that thermofax paper is used in fax machines, has a coating on one side that makes one side look shinier than the other. -- Ask students to identify white office paper and thermofax paper. -- Explain that the white office paper can be recycled.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Assortment of paper (white office, colored, thermal fax) Vocabulary <table border="0"> <tr> <td>White office paper</td><td>Shiny</td></tr> <tr> <td>Colored paper</td><td>Coating</td></tr> <tr> <td>Thermal fax paper</td><td></td></tr> </table>	White office paper	Shiny	Colored paper	Coating	Thermal fax paper	
White office paper	Shiny						
Colored paper	Coating						
Thermal fax paper							
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Explore some of the reasons that white paper needs to be separated and why you can't combine color or fax paper with it. 34	Resource Guide The Recycler's Handbook Complete Guide to Recycling at Home 35						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling Ia
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "Time"

Level C-4
Domain Vocational
Goal Area Sorting

Objective Be able to separate magazines from other papers.

Procedures -- Collect an assortment of magazines, newspapers, newsletters. -- Hand out a magazine to each student. -- Discuss characteristics of magazine: cover, texture of paper. -- Ask students to identify magazines from an assortment of periodicals including newspapers and newsletters. -- Explain in some places magazines can be recycled if separated from other papers.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Assortment of magazines, newspapers and newsletters Vocabulary <table border="0"> <tr> <td>Magazines</td><td>Texture</td></tr> <tr> <td>Newspapers</td><td>Cover</td></tr> <tr> <td>Newsletter</td><td></td></tr> </table>	Magazines	Texture	Newspapers	Cover	Newsletter	
Magazines	Texture						
Newspapers	Cover						
Newsletter							
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to identify magazines at home or to bring in mixed bundles of paper items to be sorted at school. 36	Resource Guide Let's Reduce and Recycle Recycler's Handbook Recycled: the Mobius Curriculum 37						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "Leaf Me Alone"

Level D-1
Domain Vocational
Goal Area Sorting; Grounds keeping

Objective Be able to separate leaves from other miscellaneous trash.

Procedures -- Make a pile of leaves, other yard waste and litter. -- Explain that litter is trash that is not disposed of properly and ends up on streets, sidewalks; yards. -- Ask students to pick litter from leaves and dispose in trash cans. -- Explain that many towns collect piles of leaves that are set out at curbside on special days.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors		
	Materials/Preparation An assortment of leaves Other yard waste (limbs and branches) Litter (cans, gum wrappers, small plastic bags, crumbled up pieces of paper)		
	Leaves Limbs Branches	Vocabulary Litter Dispose Trash Can	Curbside
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- In the fall, have a "leaf rolling" party on the school grounds; parents and student can do the same at home or in their neighborhood.	Resource Guide Let's Reduce and Recycle Complete Guide to Recycling at Home Recycled: the Mobius Curriculum		

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a

C.E.E.D. Objective: Identify recyclable materials vs. trash.

Instructional Activity "Nuts"

Level D-2

Domain Domestic Maintenance

Goal Area Food Handling

Objective Be able to identify plant food matter.

Procedures -- Explain that many foods come from plants. -- Show pictures of fruit and nut trees and pictures or samples of fruits and nuts. -- Show pictures of vegetables and bean plants and pictures or samples of vegetables and beans. -- Ask students to name plant foods they eat. -- Explain that plant food matter cannot decay and turn back into solid (composting).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Samples of different types of fruits and nuts, vegetables, beans (or pictures of them). Pictures of fruit and nut trees, vegetable and bean-plants Vocabulary <table><tr><td>Plant</td><td>Rot</td><td>Beans</td></tr><tr><td>Fruits</td><td>Decay</td><td>Composting</td></tr><tr><td>Nuts</td><td>Vegetables</td><td></td></tr></table>	Plant	Rot	Beans	Fruits	Decay	Composting	Nuts	Vegetables	
Plant	Rot	Beans								
Fruits	Decay	Composting								
Nuts	Vegetables									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to identify plant foods at home. Write a list of items they found and bring the list back to school.	Resource Guide Complete Guide to Recycling at Home Recycler's Handbook									

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1a

C.E.E.D. Objective: Identify recyclable materials vs. trash.

Instructional Activity "On the Hoof"

Level D-3

Domain Domestic Maintenance

Goal Area Food Handling

Objective Be able to identify animal food matter.

Procedures -- Explain that many foods come from animals. -- Show pictures of animals. -- Show pictures of meat products from the animals. -- Explain the importance of proper treatment of meat (refrigeration, cooking). -- Ask students to name animal foods they can eat. -- Discuss proper disposal and dangers of decaying rotting meat.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Pictures of cattle, sheep, pigs, chickens, turkey Pictures of meat from these animals.
	Vocabulary Beef Turkey Cheese Rot Pork Sausage Milk Chicken Eggs Decay
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to identify animal foods at home and make a list to bring to school to share. Compile a master list from all the students.	Resource Guide Recycler's Handbook Let's Reduce and Recycle

42

43

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling Ia
C.E.E.D. Objective: Identify recyclable materials vs. trash.
Instructional Activity "Dust to Dust"

Level D-4
Domain Vocational
Goal Area Sorting

Objective Be able to separate animal from plant food matter.

Procedures -- Explain that plant food waste can be recycled by composting (process of returning waste back to soil). -- Animal food waste attracts other animals and is best separated from plant food waste before composting. -- Show food pictures and ask students to separate plant food and waste from animal food and waste.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Pictures of plant foods, animal foods, plant food waste, animal food waste (skin, bones)
	Vocabulary Plant food Animal food Composting
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Start your own compost pile on the school grounds (if possible) or students may enlist parents' help in starting one at home. 44	Resource Guide Let's Reduce and Recycle Recycled: the Mobius Curriculum 45

C.E.E.D. Instructional Activity Profile

Recycling 1b

- A-1 Be able to remove contaminants from newspapers.
- A-2 Be able to wash metal cans.
- A-3 Be able to wash beverage bottles.
- A-4 Be able to wash glass food jars.
- A-5 Be able to wash dairy jugs.

- B-1 Be able to remove contaminants from newspapers and place in brown bag.
- B-2 Be able to wash, remove labels and flatten metal cans.
- B-3 Be able to wash and remove caps from beverage bottles and dairy jugs.
- B-3 Be able to wash and remove lids from glass food jars.

- C-1 After preparing cans, separate aluminum from steel.
- C-2 After preparing bottles and jars, separate glass from plastic.
- C-3 After sorting glass from plastic, separate glass bottles and jars by color
- C-4 After sorting plastic from glass, separate PET beverage bottles from HDPE dairy jugs.
- C-5 Be able to remove contaminants from white paper.

- D-1 Discuss composting systems.
- D-2 Discuss the purpose of recycling processing facilities.

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Contamination"

Level A-1
Domain Vocational
Goal Area Sorting

Objective Be able to remove contaminants from newspapers.

<u>Procedures</u> -- Explain that newspapers can be recycled (made into other paper products). -- Newspapers are prepared for recycling by removing contaminants (things that can't be recycled). -- Hold up a newspaper with a rubber band around it, remove the rubber band and explain that it is a contaminant. -- Go through the same process with the newspaper in the plastic bag and with a newspaper that has glossy inserts (glossy inserts can be recycled). -- Give each student the chance to remove the contaminants from the newspapers.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> A variety of newspapers, some with rubber bands around them, some inside plastic bags, some with glossy inserts <u>Vocabulary</u> Prepare Contaminants Recycling
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Ask the student to help prepare newspapers for recycling at home -- Plan a trip to a recycling center that handles and sorts the newspapers -- Start a collection center in the classroom.	<u>Resource Guide</u> Recycled: The Mobius Curriculum The Recycler's Handbook Let's Reduce and Recycle 48

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Yes I Can"

Level A-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to wash metal cans.

Procedures -- Explain that metal cans can be recycled (melted down and made into other metal products). -- Washing food (waste) from can is necessary for recycling (food waste attracts insects, rodents). -- Demonstrate washing and drying cans. -- Ask each student to wash and dry a can.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation An assortment of metal food cans that require washing Sink Water and basin Wash cloth or scrubby Towel Vocabulary <table> <tr> <td>Metal Can</td><td>Insects</td></tr> <tr> <td>Melt</td><td>Rodents</td></tr> <tr> <td>Waste (residue)</td><td></td></tr> </table>	Metal Can	Insects	Melt	Rodents	Waste (residue)	
Metal Can	Insects						
Melt	Rodents						
Waste (residue)							
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to help prepare cans for recycling at home, at their group home or CLA and report back to the class. -- Start a collection center in the classroom. 49	Resource Guide Reclaim, Recycle, Reuse The Recycler's Handbook Let's Reduce and Recycle 50						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Beverage Bottles"

Level A-3
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to wash beverage bottles.

Procedures -- Explain that beverage bottles can be recycled. -- Washing beverage residue from bottles is necessary in preparing for recycling (beverage residue attracts insects). -- Demonstrate washing and drying bottles. -- Ask each student to wash and dry a bottle.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation An assortment of beverage (without caps) bottles that require rinsing (plastic and glass) Sink or water and basin Wash cloth or scrubby Towel Detergent Vocabulary <table border="0"> <tr> <td>Residue</td><td>Insects</td></tr> <tr> <td>Beverage bottle</td><td>Prepare</td></tr> <tr> <td>Recycling</td><td></td></tr> </table>	Residue	Insects	Beverage bottle	Prepare	Recycling	
Residue	Insects						
Beverage bottle	Prepare						
Recycling							
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to help prepare beverage bottles for recycling at home at their group home or CLA. -- Visit a Recycling Center that accepts plastic for recycling. 51	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle 52						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b

C.E.E.D. Objective: Prepare recyclable materials for recycling.

Instructional Activity "Save the Jars"

Level A-4

Domain Domestic Maintenance

Goal Area Cleaning

Objective Be able to wash glass food jars.

Procedures -- Explain that glass jars can be recycled (can be made into other glass products). -- Washing food waste from jar is necessary in preparing glass for recycling - food waste attracts insects, rodents. -- Demonstrate washing and drying jars. -- Ask each student to wash and dry a jar.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation An assortment of glass jars that require rinsing Sink or water and basin Wash cloth or scrubby Towel Detergent Vocabulary <table border="0"> <tr> <td>Glass jar</td><td>Rodents</td></tr> <tr> <td>Recycling</td><td>Insects</td></tr> <tr> <td>Waste (residue)</td><td>Prepare</td></tr> </table>	Glass jar	Rodents	Recycling	Insects	Waste (residue)	Prepare
Glass jar	Rodents						
Recycling	Insects						
Waste (residue)	Prepare						
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to help prepare beverage jars for recycling at home at their group home or CLA. -- Take the class to a Recycling Center that handles glass. -- Start a collection center in the classroom.	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle 54						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "I Have One Word for You"

Level A-5
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to wash dairy jugs.

Procedures -- Explain that dairy jugs can be recycled. -- Washing milk residue from dairy jugs is necessary in preparing for recycling. -- Demonstrate washing and drying dairy jugs. -- Ask each student to wash and dry a dairy jug.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Assortment of dairy jugs (without caps) that require rinsing. Sink or water and basin Wash cloth or scrubby Towel Detergent Vocabulary Residue Dairy jug Recycling Prepare
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to help prepare dairy jugs for recycling at home at their group home or CLA. -- Take the class to a Recycling Center that accepts plastic. -- Start a collection center in the classroom.	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "It's in the Bag"

Level B-1
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to remove contaminants from newspapers and place in brown bag.

Procedures -- Review newspaper recycling and removal of contaminants. -- Show students examples of contaminants (rubber bands, plastic bags, glossy inserts). -- Ask students to remove contaminants from newspapers (glossy inserts can be recycled). -- Hold up a brown paper bag and explain that newspapers are placed in brown bags for curbside recycling or at a recycling drop off center. -- Ask students to place the newspapers in the brown bag.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> A variety of newspapers, some with rubber bands around them, some inside plastic bags, some with glossy inserts Brown paper (grocery) bags <u>Vocabulary</u> <table><tr><td>Contaminant</td><td>Glossy inserts</td><td>Curbside recycling</td></tr><tr><td>Recycling</td><td>Recycling drop off center</td><td></td></tr><tr><td>Plastic bags</td><td>Rubber bands</td><td></td></tr></table>	Contaminant	Glossy inserts	Curbside recycling	Recycling	Recycling drop off center		Plastic bags	Rubber bands	
Contaminant	Glossy inserts	Curbside recycling								
Recycling	Recycling drop off center									
Plastic bags	Rubber bands									
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Deliver prepared newspapers to a local recycling drop off center. -- Ask students to help parents recycle newspapers at home.	<u>Resource Guide</u> Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle									

57

58

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Flat as a Pancake"

Level B-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to wash, remove labels, and flatten metal cans.

Procedures -- Review concept of metal can recycling. -- Hold up a can and remove the label. -- Review procedure of washing and drying cans for preparation for recycling. Demonstrate using can with label removed. -- Stomp on can to prepare for storage. -- Ask each student to take a can, remove label, wash and dry, and crush for storage.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation An assortment of metal food cans that require rinsing Sink or water and basin Trash can for labels Wash cloth or scrubby Towel Water and Detergent Sink or basin Vocabulary <table border="0"> <tr> <td>Remove</td><td>Crush</td></tr> <tr> <td>Label</td><td>Storage</td></tr> <tr> <td>Stomp</td><td></td></tr> </table>	Remove	Crush	Label	Storage	Stomp	
Remove	Crush						
Label	Storage						
Stomp							
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to help prepare cans for recycling at home, at their group home or CLA. -- Start a collection center in the classroom.	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b

C.E.E.D. Objective: Prepare recyclable materials for recycling.

Instructional Activity "Top It Off"

Level B-3

Domain Domestic Maintenance

Goal Area Cleaning

Objective Be able to wash and remove caps from beverage bottles and dairy jugs.

<u>Procedures</u> -- Review concept of beverage bottle recycling, dairy jugs. -- Hold up a bottle and jug, remove the cap and throw in trash receptacle. -- Review procedure of washing and drying bottles and jugs for preparation for recycling. Demonstrate using bottle with cap removed. -- Ask each student to take a bottle and jug, remove cap, throw cap in trash receptacle and wash and dry.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> An assortment of beverage bottles (plastic and glass) and dairy jugs (with caps) requiring rinsing Sink or water and basin Sink or basin Trash receptacle Water and Detergent Wash cloth or scrubby Towel <u>Vocabulary</u> Recycling Trash can (receptacle) Remove Cap
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Ask students to help prepare cans for recycling at home, at their group home or CLA. 61	<u>Resource Guide</u> Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle 62

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Keep a Lid On It"

Level B-4
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to wash and remove lids from glass food jars.

Procedures

- Review concept of glass jar recycling.
- Hold up jar, remove lid, and throw lid in trash receptacle.
- Review procedure of washing and drying jars in preparation for recycling. Demonstrate using jar with lid removed.
- Ask each student to take a jar, remove lid, throw lid in trash receptacle and wash and dry.

Instructional Environment

- ☒ Classroom Based ☐ School Community Based
☐ Community Based ☐ Out of Doors

Materials/Preparation

An assortment of glass jars (with lids) requiring rinsing
Sink or water and basin
Wash cloth or scrubby Trash receptacle
Towel
Water and Detergent
Sink or basin

Vocabulary

Recycling Lid
Remove Trash can (receptacle)

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

- Ask students to help prepare cans for recycling at home, at their group home or CLA.

Resource Guide

Complete Guide to Recycling at Home
The Recycler's Handbook
Let's Reduce and Recycle

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b

C.E.E.D. Objective: Prepare recyclable materials for recycling.

Instructional Activity "Stick to It"

Level C-1

Domain Vocational

Goal Area Sorting

Objective After preparing cans, separate aluminum from steel.

Procedures

- Explain that aluminum cans can be recycled into other aluminum products and steel cans into steel products.
- Prepare cans for recycling (see objective 1B/B-2 for specific steps).
- Show students a magnet and remind them that materials made of iron (including steel) are attracted to/stick to magnets.
- Give each student the chance to identify the steel cans using the magnets.
- Separate cans into two piles: one for aluminum and one for steel.

Instructional Environment

- ☒ Classroom Based ☐ School Community Based
☐ Community Based ☐ Out of Doors

Materials/Preparation

Aluminum Cans
Steel Cans
Magnets

Vocabulary

Aluminum
Iron
Steel

Magnet
Attract

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

- Ask students to use a magnet to separate aluminum from steel cans at home, at their group home or CLA.

Resource Guide

Complete Guide to Recycling
The Recycler's Handbook
Let's Reduce and Recycle

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Sort It Out"

Level C-2
Domain Vocational
Goal Area Sorting

Objective After preparing bottles & jars for recycling, separate glass from plastic.

Procedures -- Explain that glass beverage bottles and jars can be recycled into other glass products and plastic beverage bottles or jugs can be recycled into other plastic products. -- Prepare bottles, jugs, jars for recycling (see objective 1B/B-3 and B-4 for specific steps). -- Hold up glass bottle and jar and discuss features (hard, breakable). -- Hold up plastic bottle and jug discuss features (pliable). -- Hand out one glass and one plastic bottle to each student and ask each one to distinguish between glass and plastic. -- Ask class to separate bottles, jars and jugs on to two different places one for glass and one for plastic.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Glass jars and beverage bottles (of different colors); plastic beverage bottles, jugs. Vocabulary <table> <tr> <td>Glass</td> <td>Hard</td> <td>Breakable</td> </tr> <tr> <td>Plastic</td> <td>Jug</td> <td>Pliable</td> </tr> <tr> <td>Bottle</td> <td>Jar</td> <td></td> </tr> </table>	Glass	Hard	Breakable	Plastic	Jug	Pliable	Bottle	Jar	
Glass	Hard	Breakable								
Plastic	Jug	Pliable								
Bottle	Jar									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to distinguish between glass bottles and jars and plastic beverage bottles, milk jugs and water jugs at home, at their group home or CLA. -- Assign students to bring in either plastic or glass.	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle									

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "R-G-B"

Level C-3
Domain Vocational
Goal Area Sorting

Objective After sorting glass from plastic, separate glass bottles and jars by color.

<u>Procedures</u> -- Explain that the best way to collect glass bottles and jars for recycling is to separate out by color. -- After separating glass from plastic (see 1B/C-2), hold up a bottle that is made from: clear glass, brown glass, green glass. -- Ask students to separate glass bottles into the three categories (clear, brown, green).	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Glass bottles Clear Brown Green <u>Vocabulary</u> Clear (flint) glass Brown (amber) glass Green glass
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Assign students to bring in one of the three colored bottles or jars from home, their group home or CLA. 69	<u>Resource Guide</u> Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle 70

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "B.A., M.A., PhD., AM and FM"

Level C-4
Domain Vocational
Goal Area Sorting

Objective After sorting plastic from glass, separate PET beverage bottles from HPDE dairy jugs.

Procedures -- Explain that the best way to collect plastic bottles and dairy jugs for recycling is to separate by PET and HPDE (type of resin from which they are made). -- Separate plastic from glass (see 1B/C-2). -- Review that plastic soda bottles are usually made from a plastic (resin) called PET and may have a #1 code on the bottom. -- Also review that plastic dairy jugs are usually made from a plastic (resin) called HPDE and may have a #2 code on bottom. -- Ask students to separate plastic soda bottles (PET) from dairy jugs (HPDE).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation PET soda bottles HPDE dairy jugs Vocabulary PET plastic HPDE plastic
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Assign different students to bring in only one type of plastic from home, their group home or CLA. 71	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle 72

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Staples"

Level C-5
Domain Domestic Maintenance
Goal Area Cleaning

Objective Remove contaminants from white paper.

Procedures -- Review white paper can be recycled -- it is best to separate from colored paper and then fax paper and remove contaminants. -- Remove white paper from pile of assorted papers (see objective 1A/C-1). -- Show students examples of contaminants (paper clips, staples). -- Ask students to remove paper clips and staples from papers.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Assortment of paper (white office, colored, thermofax) Be sure that white paper has contaminants (staples, paper clips) Vocabulary <table border="0"> <tr> <td>White office paper</td><td>Contaminants</td></tr> <tr> <td>Colored paper</td><td>Paper clips</td></tr> <tr> <td>Thermal fax</td><td>Staples</td></tr> </table>	White office paper	Contaminants	Colored paper	Paper clips	Thermal fax	Staples
White office paper	Contaminants						
Colored paper	Paper clips						
Thermal fax	Staples						
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Assign students to bring in at least one type of "contaminant" that would effect paper recycling from home, their group home or CLA.	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b
C.E.E.D. Objective: Prepare recyclable materials for recycling.
Instructional Activity "Heap It On"

Level D-1
Domain Domestic Maintenance
Goal Area Gardening

Objective Discuss composting systems.

Procedures -- Explain that plant food waste and leaves and branches can be used in a composting system to produce fertilizer. -- Composting systems can be set up in backyard, school yard or by businesses. -- Benefits: compost enriches soil; compost materials become compost rather than trash.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Pictures of composting systems Vocabulary Composting/compost Fertilizer Decay
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Visit composting facility -- Create school composting project. 75	Resource Guide Complete Guide to Recycling at Home The Recycler's Handbook Let's Reduce and Recycle Backyard Composting 76

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1b

C.E.E.D. Objective: Prepare recyclable materials for recycling.

Instructional Activity "On-site"

Level D-2

Domain	Domestic Maintenance
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Goal Area	Cleaning
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Objective Discuss the purpose of recycling processing facilities.

Procedures

-- Explain that materials must be separated by type in preparation for being made into new products.

- * Metal cans to aluminum to new products
- * Metal cans to steel new products
- * Glass bottles to clear new products
- * Glass bottles to amber to new products
- * Glass bottles to green to new products
- * Plastic bottles to PET to new products
- * Plastic bottles to HPDE to new products

-- Some recycling programs collect materials together (commingled); one bucket may be used for all glass, plastic, and metal containers.

-- Commingled materials are taken to processing facilities where they are separated by material type before being made into new products.

-- Students may want to consider vocational opportunities at

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

- Visit nearby processing facility.

Instructional Environment

☒ Classroom Based ☐ School Community Based
☐ Community Based ☐ Out of Doors

Materials/Preparation

Old can
New can
Old plastic bottle
New plastic bottle

Old glass jar
New glass jar

Vocabulary

Commingled materials Processing facility

Resource Guide

Complete Guide to Recycling at Home
The Recycler's Handbook
Let's Reduce and Recycle

C.E.E.D. Instructional Activity Profile

Recycling 1c

- A-1 Identify trash receptacle.
- A-2 Identify recycling bins for (1) newspapers (2) metal cans (3) beverage bottles (4) glass jars and (5) dairy jugs.

- B-1 Be able to identify newspaper, remove contaminants and place in newspaper recycling bin.
- B-2 Be able to prepare metal cans and place in metal can recycling bin.
- B-3 Be able to prepare bottles and place in bottle recycling bin.
- B-4 Be able to prepare glass jars and place in glass jar recycling bin.
- B-5 Be able to prepare dairy jugs and place in dairy jug recycling bin.

- C-1 Separate aluminum from steel cans and place in separate bins.
- C-2 Separate glass from plastic bottles and place in separate bins.
- C-1 Separate various colored glass and place in separate bins.
- C-1 Separate white from colored and fax paper and place in white paper bin.

- D-1 Discuss and show examples of different recycling containers used in homes, schools, offices.
- D-2 Discuss products made from recycled materials.

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "Trash It"

Level A-1
Domain Domestic Maintenance
Goal Area Cleaning

Objective Identify trash receptacle.

Procedures -- Discuss the word "trash" - what is trash? where does it come from? what do we do with it? -- Point out trash receptacle in classroom; identify items in the trash can. -- Where are trash receptacles located? - in each classroom; cafeteria; at home; along the street; (show pictures or have examples of different types of receptacles).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Trash receptacle with classroom trash Pictures or examples of different types of trash receptacles (waste basket, trash can) Vocabulary Trash Receptacle
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to identify trash receptacles at home, at their group home or CLA. -- Assign students to bring in a picture of a trash can (from an advertisement, etc.)	Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "I've Bin There"

Level A-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Identify recycling bins for newspaper, metal cans, beverage bottles, glass jars, dairy jugs.

Procedures -- Purchase or make a bin or container for each set of materials: newspapers; metal cans; beverage bottles; food jars; dairy jugs. -- Label each bin or container with name of material and use velcro to attach sample materials. -- Ask students to identify the bin for each material.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors						
	Materials/Preparation Five recycling bins (purchase or make) Can use old boxes of any kind (put in a plastic bag as a liner for bottles and cans that have been washed)						
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Assign students to see what type of recycling bins they may have at home, at their group home or CLA.	Vocabulary <table> <tr> <td>Newspapers</td><td>Food jars</td></tr> <tr> <td>Metal cans</td><td>Dairy jugs</td></tr> <tr> <td>Beverage bottles</td><td></td></tr> </table> Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home	Newspapers	Food jars	Metal cans	Dairy jugs	Beverage bottles	
Newspapers	Food jars						
Metal cans	Dairy jugs						
Beverage bottles							

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "Bag or Bin?"

Level B-1
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to identify newspaper, remove contaminants, and place in newspaper recycling bin.

Procedures -- Review newspaper recycling and removal of contaminants (1B/B-1). -- Ask students to remove contaminants from newspapers (glossies can be recycled with magazines). -- Ask each student to place newspaper in newspaper recycling bin.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Assign students to bring in newspapers with contaminants already removed from home, at their group home or CLA.	Materials/Preparation A variety of newspapers: some with rubber bands around them; some inside plastic bags; some with glossy inserts Newspaper recycling bin, other recycling bins Vocabulary Contaminant Newspaper recycling bin Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "Metal on Metal"

Level B-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to prepare metal cans and place in metal can recycling bin.

Procedures -- Review metal can recycling (1B/B-2). -- Ask each student to take a can, remove label, wash and dry and crush for storage. -- Ask each student to place can in metal can recycling bin.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation An assortment of metal food cans that require rinsing Sink or basin Trash can for labels Water Metal can recycling bin and other recycling bins Wash cloth or scrubby Towel Vocabulary Metal can recycling bin
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Let students bring in cans from home, group home or CLA that have already been prepared for recycling.	Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "Bottle Cap"

Level B-3
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to prepare bottles and place in bottle recycling bin.

Procedures -- Review beverage bottle recycling and preparation for recycling (1B/B-3). -- Ask each student to take a bottle, remove cap, throw cap in trash receptacle and wash and dry. -- Ask each student to place bottle in bottle recycling bin.	Instructional Environment ☒ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation An assortment of beverage bottles (plastic and glass) (with caps) that require rinsing Sink or basin and water Recycling bins Wash cloth or scrubby Tow Vocabulary Bottle Recycling Bin
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Tell students to bring in bottles that have already been prepared for recycling from home, their group home or CLA.	Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "A Jar Ahead"

Level B-4
Domain Domestic Maintenance
Goal Area Cleaning

Objective Be able to prepare glass jars and place in glass jar recycling bin.

<u>Procedures</u> -- Review glass jar recycling and preparation for recycling (1B/B-4). -- Ask each student to take a glass food jar, remove lid, throw lid in trash receptacle and wash and dry. -- Ask each student to place glass jar in glass jar recycling bin.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> An assortment of glass jars (with lids) that require rinsing Sink or basin and water Trash receptacles Recycling bins Wash cloth or scrubby Towel <u>Vocabulary</u> Glass Jar Recycling bin
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Have students bring in glass jars that they have prepared for recycling at home, their group home or their CLA.	<u>Resource Guide</u> Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas:	Recycling 1c
C.E.E.D. Objective:	Separate recyclable materials into receptacles.
Instructional Activity	"Milk it for all it's worth"

Level	B-5
Domain	Domestic Maintenance
Goal Area	Cleaning

Objective Be able to prepare dairy jugs and place in plastic recycling bin.

Procedures -- Review dairy jug recycling and preparation for recycling (1B/B-3). -- Ask each student to take a dairy jug, remove cap, throw cap in trash receptacle and wash and dry. -- Ask each student to place dairy jug in plastic recycling bin.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> An assortment of of dairy jugs (with caps) that require rinsing Sink or basin and water Trash receptacles Detergent Recycling bins Wash cloth or scrubby Towel
	<u>Vocabulary</u> Dairy Jug Recycling Bin
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Assign students to bring in jugs that they have prepared for recycling at home, their group home or CLA to be recycled at school.	<u>Resource Guide</u> Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c

C.E.E.D. Objective: Separate recyclable materials into receptacles.

Instructional Activity "Cans of Steel"

Level C-1

Domain Vocational

Goal Area Sorting

Objective Separate aluminum from steel cans and place in metal recycling bins.

Procedures -- Review metal can recycling (1C/B-2). -- Explain to students that aluminum cans are separated from steel cans before being made into new products. -- Ask students to identify steel cans using magnet. -- Students will then place steel cans in steel can recycling bin and aluminum cans in aluminum can bin.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Metal can recycling bin with an assortment of aluminum and steel cans Aluminum can recycling bin Steel can recycling bin Magnet Vocabulary New products Aluminum Magnet Steel
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Assign students to bring in either steel or aluminum cans they have prepared for recycling at home, group home or CLA to be collected in school. 94	Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home 95

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "Glass or Plastic"

Level C-2
Domain Vocational
Goal Area Sorting

Objective Separate glass from plastic bottles and place in separate bins.

Procedures -- Remove beverage bottle recycling (1C/B-3). -- Explain to students that glass beverage bottles are separated from plastic beverage bottles before being made into new products. -- Ask students to identify glass bottles. -- Explain that glass bottles and jars can be placed in same recycling bin because they are made from same material (glass). -- Students will then place glass bottles in a recycling bin with glass jars.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Bottle recycling bin with an assortment of glass and plastic bottles (of different colors) Plastic bottle recycling bin Glass bottles and jar recycling bin Vocabulary New products Glass bottle and jar recycling bin Plastic bottle recycling bin
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Let students bring in glass or plastic that they have prepared for recycling at home, their group home or CLA to be recycled at school. 96	Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home 97

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c

Level C-3

C.E.E.D. Objective: Separate recyclable materials into receptacles.

Domain Vocational

Instructional Activity "R-G-B #2"

Goal Area Sorting

Objective Separate various colored glass bottles and jars and place in separate bins.

Procedures -- Review glass recycling by color (1B/C-3). -- Explain that glass bottles and jars are best separated by color before being made into new products. -- Hold up a bottle that is made from: clear glass; brown glass; green glass. -- Ask students to separate glass bottles and jars into the appropriate recycling bin by color.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Glass bottle and jar recycling bin Clear glass recycling bin Brown glass recycling bin Green glass recycling bin
	Vocabulary New products Clear glass recycling bin Brown glass recycling bin Green glass recycling bin
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Students can be assigned to bring in specific color of glass from home, their group home or their CLA. 98	Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home 99

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c
C.E.E.D. Objective: Separate recyclable materials into receptacles.
Instructional Activity "White on White"

Level C-4
Domain Vocational
Goal Area Sorting

Objective Separate white paper from colored and thermal fax paper and place in white paper bin.

<u>Procedures</u> -- Review white office paper recycling (1B/C-5). -- Students will identify white office paper from assortment of paper. -- Students will remove contaminants. -- Students will place white office paper in white office paper recycling bin.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Assortment of paper (white, office, colored, thermal fax) Be sure that white paper has contaminants (staples, paper clips) Recycling bins <u>Vocabulary</u> <table border="0"> <tr> <td>White office paper</td><td>Contaminants</td></tr> <tr> <td>Colored paper</td><td>Paper clips</td></tr> <tr> <td>Thermal fax paper</td><td>Staple</td></tr> <tr> <td>White office paper recycling bin</td><td></td></tr> </table>	White office paper	Contaminants	Colored paper	Paper clips	Thermal fax paper	Staple	White office paper recycling bin	
White office paper	Contaminants								
Colored paper	Paper clips								
Thermal fax paper	Staple								
White office paper recycling bin									
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Student can bring in white paper only that they have collected at home, their group home or CLA to be recycled at school. 100	<u>Resource Guide</u> Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home 101								

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c

Level D-1

C.E.E.D. Objective: Separate recyclable materials into receptacles.

Domain Vocational

Instructional Activity "Home and School Association"

Goal Area Sorting

Objective Discuss and show examples of different recycling containers used in homes, schools, offices.

<u>Procedures</u> -- Explain that different types (styles) of recycling bins/containers are used in different places. -- Show pictures or examples: recycling container from a local curbside collection program; recycling containers at a local drop-off center; recycling containers used in offices (for paper). -- Discuss ways of identifying containers.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Pictures or examples of recycling bins/containers
	<u>Vocabulary</u> Curbside collection Drop-off
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Deliver recyclable materials to a buy-back center for money, which could be done as a "fund raiser" or at a municipal center, just as good citizens/recyclers. 102	<u>Resource Guide</u> Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home 103

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1c

C.E.E.D. Objective: Separate recyclable materials into receptacles.

Instructional Activity "Recycle-Reuse"

Level D-2

Domain Vocational

Goal Area Sorting

Objective Discuss products made from recycled materials.

Procedures -- Select materials that are labeled as having recycled content. -- Discuss difference between making products from raw materials and recycled materials. -- Discuss benefits of using recycled materials. -- Show students materials with recycled content and labeling.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Samples of products made from recycled materials: newspaper, paper towels, white office paper, glass bottle, aluminum can
	Vocabulary Raw materials Recycled materials Recycled content
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Visit a factory making products from recycled materials, either paper, aluminum or plastic, depending on what is available in your area (if any). 104	Resource Guide Let's Reduce and Recycle Recycler's Handbook Complete Guide to Recycling at Home 105

C.E.E.D. Instructional Activity Profile

Recycling 1d

- A-1 Identify empty containers.
- A-2 Identify something made from cloth.
- A-3 Identify paper that can be reused.
- A-4 Identify box that can be reused.

- B-1 Prepare empty container for reuse.
- B-2 Prepare cloth products for reuse.
- B-3 Prepare paper for reuse.
- B-4 Prepare box for reuse.

- C-1 Identify activities for reuse of empty containers.
- C-2 Identify activities for reuse of cloth items.
- C-3 Identify activities for reuse of paper.
- C-4 Identify activities for reuse of box.
- C-5 Identify other objects/materials that can be reused.
- D-1 Identify difference between reuse and recycle.
- D-2 Identify reasons for reuse.
- D-3 Name natural resources saved through reuse.
- D-4 Create school/community activity promoting reuse.

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

Level A-1

C.E.E.D. Objective: Identify reusable materials and their uses.

Domain Functional Academics

Instructional Activity "Running on Empty"

Goal Area Measurement

Objective Identify empty containers.

Procedures -- Gather together on a table a variety of containers, some empty, some full (jars, soda cans, etc.). -- Ask students to identify (point, touch) the empty containers. -- Show proof of emptiness (turn container upside down).	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Juice bottles/cans Soda bottles/cans Milk containers Jars
	<u>Vocabulary</u> Empty Not empty Full Container
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Identify empty containers at home, group home or CLA; bring "empty container" of any kind into school to be reused for holding pencils. 107	<u>Resource Guide</u> Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 108

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity "The Cut of the Cloth"

Level A-2
Domain Vocational
Goal Area Sewing

Objective Identify something made from cloth.

Procedures -- Show students a variety of cloth (curtain, clothing, towel, pillow case) and non-cloth items (paper, cardboard, rubber mat). -- Talk about what cloth is used for and what it feels like. -- Ask each student to close his/her eyes and feel the cloth items and then the non-cloth ones. -- Mix up the items and ask the students to identify the cloth ones (point/touch).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors								
	Materials/Preparation <table border="0"> <tr> <td>Clothing</td> <td>Paper</td> </tr> <tr> <td>Pillow case</td> <td>Cardboard</td> </tr> <tr> <td>Towel</td> <td>Rubber mat</td> </tr> <tr> <td>Curtain</td> <td>Plastic wrap</td> </tr> </table>	Clothing	Paper	Pillow case	Cardboard	Towel	Rubber mat	Curtain	Plastic wrap
	Clothing	Paper							
Pillow case	Cardboard								
Towel	Rubber mat								
Curtain	Plastic wrap								
Vocabulary Cloth									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Identify cloth items at home. 109	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 110								

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity "Scrap Paper"

Level A-3
Domain Vocational
Goal Area Sorting

Objective Identify paper that can be reused.

Procedures -- Collect an assortment of papers. -- Show students paper with printing on one side and explain concept of "blank side." -- Show the students a pile of paper with printing on one and two sides. Ask them to identify paper with blank side.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Paper with printing on one side; paper with printing on two sides
	Vocabulary Blank side Printing
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to distinguish between papers printed on one side and two sides. 111	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 112

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

C.E.E.D. Objective: Identify reusable materials and their uses.

Instructional Activity "Scrap Box"

Level A-4

Domain Vocational

Goal Area Sorting

Objective Identify boxes that can be reused.

Procedures -- Collect an assortment of boxes of different sizes. -- Discuss what a box is (rectangular container usually with lid or cover) and what it is used for (storage). -- Show students boxes holding different items (pencils, paper, books). -- Ask students to point out other boxes around the room.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Assortment of boxes of various sizes and shapes holding different materials Vocabulary Box Storage
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to identify boxes at home. 113	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 114

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

C.E.E.D. Objective: Identify reusable materials and their uses.

Instructional Activity "Deja Vu"

Level B-1

Domain Vocational

Goal Area Manipulation, Assembly, & Packaging

Objective Prepare empty containers for reuse.

<u>Procedures</u> -- Demonstrate a variety of ways to prepare selected empty containers for reuse. Example: juice cans, coffee cans, small boxes, plastic bottles, glass jars. -- Have students rinse, dry and remove labels.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> <table border="0"> <tr> <td>Water</td> <td>Juice cans</td> </tr> <tr> <td>Coffee cans</td> <td>Small boxes</td> </tr> <tr> <td>Plastic bottles</td> <td>Glass jars</td> </tr> <tr> <td>Soap</td> <td>Towel</td> </tr> </table> <u>Vocabulary</u> <table border="0"> <tr> <td>Label</td> <td>Remove/take off</td> </tr> <tr> <td>Rinse</td> <td>Dry</td> </tr> </table>	Water	Juice cans	Coffee cans	Small boxes	Plastic bottles	Glass jars	Soap	Towel	Label	Remove/take off	Rinse	Dry
Water	Juice cans												
Coffee cans	Small boxes												
Plastic bottles	Glass jars												
Soap	Towel												
Label	Remove/take off												
Rinse	Dry												
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Allow students to take home a container that has been prepared for refuse that won't be used in school. 115	<u>Resource Guide</u> Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 116												

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity "The Emperor's New Clothes"

Level B-2
Domain Vocational
Goal Area Manipulation, Assembly, & Packaging

Objective Prepare cloth products for reuse.

Procedures -- Talk about the importance of washing cloth items before reuse. -- Demonstrate technique of washing items by hand or using washing machine. -- Demonstrate technique of hanging items up to dry or using dryer. -- Have students practice the demonstrated techniques.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Cloth item or items If by hand, water, detergent, measuring cup, basin, towel, place to dry, clothes pins (if necessary) If by machine, detergent, measuring cup, washing machine and dryer
	Vocabulary Germ's Measuring cup Dryer Dirty Washing machine Detergent Dryer
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Help wash and dry clothes at home. 117	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 118

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

C.E.E.D. Objective: Identify reusable materials and their uses.

Instructional Activity "Same Old, Same Old"

Level B-3

Domain Vocational

Goal Area Manipulation, Assembly, & Packaging

Objective Prepare paper for reuse.

<u>Procedures</u> -- Collect an assortment of papers with printing on one side and two sides. -- Ask students to separate papers into two piles: pile one - papers with blank sides; pile two - papers with printing on both sides. -- Check piles and then give students pile one and ask them to put blank sides up. -- Place pile one in box.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Take collected paper (with printing on both sides) to a recycling center that will accept it. -- Cut up reusable sheets into note-size paper and bind.	<u>Materials/Preparation</u> Paper with printing on one side Paper with printing on two sides Box for pile of papers with printing on one side <u>Vocabulary</u> Blank side Printing
<u>Resource Guide</u> Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home	120

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

C.E.E.D. Objective: Identify reusable materials and their uses.

Instructional Activity "Boxing Helena"

Level B-4

Domain Vocational

Goal Area Manipulation, Assembly, & Packaging

Objective Prepare box for reuse.

Procedures -- Collect an assortment of empty boxes. -- Review concept of empty (turn box upside down). -- Discuss importance of using clean boxes (show a box with food stains, pizza box and explain that the box is best thrown out and not reused -- issues of insects, rodents). -- Identify clean boxes for reuse.	Instructional Environment ☒ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Assortment of empty boxes Box with food stain (pizza box)
	Vocabulary Empty Insects Clean box Rodents
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Pick a few boxes to reuse for storing items (books, gym equipment, etc.) at school. -- Have students bring boxes in from home that can be reused. -- Get boxes at stores before they are thrown out.	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity "Again and Again"

Level C-1
Domain Vocational
Goal Area Manipulation, Assembly, and Packaging

Objective Identify activities for reuse of empty containers.

Procedures -- Clean and dry juice container. Remove label. -- Select and cut out a variety of magazine pictures. -- Glue pictures to juice container, in a collage. -- (Optional) paint a shellac coating over pictures.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Juice can Scissors Magazine Glue
	<u>Vocabulary</u> Magazine Container Cut Glue
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- This can be done in a variety of ways, using different containers to make a variety of crafts. 123	<u>Resource Guide</u> Craft books Trash to Treasure Land (ARCO Chemical Company) Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 124

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity "Rag Bag"

Level C-2
Domain Domestic Maintenance
Goal Area Sewing

Objective Identify activities for reuse of cloth items.

Procedures -- Clean and dry cloth items. -- Present options for reuse: clothing drive (if in good condition); rags (if torn or stained). -- Fold clothing and place in bags or boxes for clothing drive. -- Cut torn or stained cloth into rags for cleaning.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Materials for cleaning and drying (see activity 1D/B-2) Old clothing, sheets, curtains (ask students to bring items from home) Scissors Bags or boxes for clothing drive Vocabulary Clothing Drive Rags Torn Stains
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Have class or school participate in a community clothing drive. 125	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 126

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity "Paper Moon"

Level C-3
Domain Vocational
Goal Area Office & Clerical

Objective Identify activities for reuse of paper.

Procedures -- Set aside papers with one blank side in a box labeled "paper for reuse." -- Explain concept of reuse (discuss what the papers have already been used for: homework, class assignments). -- Hand out a paper from the pile to each student. -- Have the student use blank side for a classroom activity.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Box for paper Label "paper for reuse" Paper with a blank side
	Vocabulary Reuse Blank
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Prepare a box of "paper for reuse" at home. 127	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 128

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity "Box It"

Level C-4
Domain Vocational
Goal Area Manipulation, Assembly, & Packaging

Objective Identify activities for reuse of box.

Procedures -- Place piles of different materials on table (pencils, papers, books, magazines, other classroom materials). -- Collect an assortment of boxes that is suitable for holding these items. -- Check that the boxes are empty and clean. -- Collect an assortment of boxes that is suitable for holding these items. -- Place materials in boxes and label each box. -- Find a place in classroom to keep boxes.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Boxes Assorted materials (pencils, papers, books, magazines, other classroom materials) Labels Markers Vocabulary Empty Clean Reuse
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Have students bring in/take home boxes that can be reused. 129	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 130

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

C.E.E.D. Objective: Identify reusable materials and their uses.

Instructional Activity "Wrap It Up"

Level C-5

Domain Vocational

Goal Area Sorting

Objective Identify other objects/materials that can be reused.

Procedures -- Show students other examples of reuse: collage made from magazine pictures; present wrapped in comic strip paper; glass bottles for cold water in refrigerator. -- Ask students to identify materials that have been reused. -- Ask students to suggest other materials that can be reused.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Collage made from magazine pictures Box wrapped in comic strip paper Glass bottle with drinking water
	Vocabulary Collage Gift wrap
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to suggest materials that can be reused at home. 131	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 132

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d
C.E.E.D. Objective: Identify reusable materials and their uses.
Instructional Activity: "Salvation Army"

Level: D-1
Domain: Functional Academics
Goal Area: Reasoning/Consequences

Objective: Identify difference between reuse and recycle.

Procedures -- Place many empty containers on table. Have students point out objects we can recycle and those we can reuse for classroom projects. -- Demonstrate art activities for reusable products. -- Point out objects in classroom which are reused.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Jars

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

Level D-2

C.E.E.D. Objective: Identify reusable materials and their uses.

Domain Vocational

Instructional Activity "Tell Me Why"

Goal Area Reasoning/Consequences

Objective Identify reasons for reuse.

Procedures -- Discuss trash and where it goes: landfill; incinerator. -- Problems with trash: cost of disposal; pollution of air and water. -- Best to reuse and recycle so less trash is produced. -- Bring in a bag of sorted trash and weigh. Then take out items that can be reused or recycled and weigh again. -- Compare results and review importance of waste reduction.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Pictures of landfill and incinerator Bag of assorted trash (no food waste) Scale Vocabulary <table> <tr> <td>Landfill</td> <td>Pollution</td> </tr> <tr> <td>Incinerator</td> <td>Waste reduction</td> </tr> <tr> <td>Disposal</td> <td></td> </tr> </table>	Landfill	Pollution	Incinerator	Waste reduction	Disposal	
Landfill	Pollution						
Incinerator	Waste reduction						
Disposal							
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Visit landfill. -- Visit incinerator. 135	Resource Guide Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 136						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

Level D-3

C.E.E.D. Objective: Identify reusable materials and their uses.

Domain Vocational

Instructional Activity "Natural Resources"

Goal Area Reasoning/Consequences

Objective Name natural resources saved through reuse.

<u>Procedures</u> -- Prepare a poster showing raw materials needed for different items. -- Trees to paper and paper products -- Bauxite to aluminum -- Fossil fuels (oil and natural gas) to plastics -- Discuss how reuse and recycling save resources.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> <table> <tr> <td>Poster board(s) Product Bauxite</td><td>Fossil Resources</td></tr> </table> <u>Vocabulary</u> <table> <tr> <td>Natural resources Bauxite Aluminum</td><td>Fossil fuels Raw materials</td></tr> </table>	Poster board(s) Product Bauxite	Fossil Resources	Natural resources Bauxite Aluminum	Fossil fuels Raw materials
Poster board(s) Product Bauxite	Fossil Resources				
Natural resources Bauxite Aluminum	Fossil fuels Raw materials				
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Visit forest to illustrate tree harvesting. -- Develop list of other ways to save resources (through alternative materials) either natural or man-made. 137	<u>Resource Guide</u> Let's Reduce and Recycle Reclaim, Recycle, Reuse Complete Guide to Recycling at Home 138				

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1d

C.E.E.D. Objective: Identify reusable materials and their uses.

Instructional Activity "Pre-Owned"

Level D-4

Domain Vocational

Goal Area Grounds keeping

Objective Create school/community activity promoting reuse.

Procedures

- Identify a community clothing drive or Christmas toy collection program.
- Discuss how the collected items will benefit others.
- Discuss importance of preparing items for collection (washing).
- Set up a collection system at school and ask students to bring in items from home.

Instructional Environment

- ☒ Classroom Based ☐ School Community Based
☒ Community Based ☐ Out of Doors

Materials/Preparation

Set up a collection system at school (boxes, bags, storage area)
 Transportation to community collection location

Vocabulary

Clothing drive
 Christmas toy collection program
 Prepare
 Collect

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

- Students can do the same thing on a smaller scale at home or in their group home or Community Living Arrangement.

Resource Guide

Let's Reduce and Recycle
 Reclaim, Recycle, Reuse
 Complete Guide to Recycling at Home

C.E.E.D. Instructional Activity Profile

Recycling 1e

- A-1 Identify the products with the "toxic" and "non-toxic" stickers.
- A-2 Separate the products into two groups - toxic and non-toxic
- A-3 Identify results/consequences of using toxic products.
- A-4 Identify benefits of non-toxic products.

- B-1 Student will use a spray bottle properly.
- B-2 Student will pour cleaning liquids safely.
- B-3 Student will safely store products and clean up.
- B-4 Student will properly dispose of waste products.

- C-1 Identify/locate the "poison symbol" on product label.
- C-2 Identify/locate the word "toxic" on product label.
- C-3 Identify/locate the word "flammable" on product label.
- C-4 Identify/locate the word "poisonous" on product label.

- D-1 Identify key vocabulary words as sight words.
- D-2 Explore health/safety issues of using toxic household products.
- D-3 Explore environmental issues of improper disposal of toxic products.

C.E.E.D. Instructional Activity Plan

<u>Content Areas:</u>	<u>Recycling 1e</u>
<u>C.E.E.D. Objective:</u>	<u>Discriminate btwn. household toxins & non-toxins.</u>
<u>Instructional Activity</u>	<u>"Mr. Yuck"</u>

Level	A-1
Domain	Domestic Maintenance
Goal Area	Cleaning

Objective Identify products with the "toxic" and "non-toxic" stickers.

<u>Procedures</u> -- Teacher will display a variety of household products with stickers already on (green stickers indicate non-toxic; red indicate toxic). Sticker should be placed on label near words identifying toxicity. Toxic may also have "yuck sticker." -- Discuss the meaning (show pictures of streams with pollution and dead fish or something similar). -- Have the students point to the toxic products.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Household products Stickers (choose a sticker green dot with non-toxic on it) Magazine pictures Pesticides <u>Vocabulary</u> <table border="0"> <tr> <td>Toxic</td><td>Danger</td></tr> <tr> <td>Non-toxic</td><td>Biodegradable</td></tr> <tr> <td>Warning</td><td>Caution</td></tr> </table>	Toxic	Danger	Non-toxic	Biodegradable	Warning	Caution
Toxic	Danger						
Non-toxic	Biodegradable						
Warning	Caution						
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Identify toxic products in the home. -- Identify toxic products in stores on Community Based Instruction trips.	<u>Resource Guide</u> Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively						

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "I'm Ok, You're Not"

Level A-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Separate products into two groups: toxic / non-toxic.

Procedures -- Teacher will display variety of household products. -- Students will locate stickers on products. -- Students will place toxic products on one table. -- Students will place non-toxic products on one table.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Household products Stickers
	Vocabulary Toxic Non-toxic Warning Danger Biodegradable Caution
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Identify products at home. Choose non-toxic/biodegradable products when shopping. 144	Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 145

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "You Make Me Sick"

Level A-3
Domain Domestic Maintenance
Goal Area Cleaning

Objective Identify results/consequences of using toxic products.

Procedures -- Teacher will place hair clippings in a jar with bleach and in a jar with drain cleaner. -- Students will observe effects of non-toxic products on hair clippings.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors					
	<u>Materials/Preparation</u> Hair clippings (from beauty salon) Toxic products Jars/containers Magazine pictures					
	<u>Vocabulary</u> <table border="0"> <tr> <td>Toxic</td> <td>Danger</td> </tr> <tr> <td>Non-toxic</td> <td>Biodegradable</td> </tr> <tr> <td>Warning</td> <td>Caution</td> </tr> </table>	Toxic	Danger	Non-toxic	Biodegradable	Warning
Toxic	Danger					
Non-toxic	Biodegradable					
Warning	Caution					
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Visit local streams. -- Participate in stream studies. 146	<u>Resource Guide</u> Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 147					

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e

C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.

Instructional Activity "Old Man River"

Level A-4

Domain	Domestic Maintenance
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Goal Area Cleaning

Objective Identify benefits of non-toxic product use.

Procedures

-- Teacher will place hair clippings in a jar with baking soda and water and in a jar with vinegar and water.

-- Students will observe effects of non-toxic products on hair clippings.

Instructional Environment

☒ Classroom Based ☐ School Community Based☒ Community Based ☐ Out of Doors

Materials/Preparation

Hair clippings (from beauty salon)

Non-toxic products

Jars/containers

Magazine pictures

Vocabulary

Toxic
Non-toxic
Warning

**Danger
Biodegradable
Caution**

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

-- Visit local streams.

-- Stream studies are available or you can design your own stream study to observe the accumulation of trash in stream (count how much on successive visits).

Resource Guide

Let's Reduce and Recycle

Complete Book of Home Environmental Hazards

Clean Your House Safely and Effectively

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149

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e

C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.

Instructional Activity "Spray"

Level B-1

Domain Domestic Maintenance

Goal Area Cleaning

Objective Students will use a spray bottle properly.

Procedures -- Teacher will demonstrate: (1) put on rubber gloves (2) pick up bottle appropriately (3) point out nozzle (4) shake if necessary. -- Students will use spray bottle correctly (use of bottle filled with water for practice!).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors					
	Materials/Preparation Spray bottle Water Rubber gloves					
	Vocabulary <table border="0"> <tr> <td>Spray</td> <td>Shake</td> </tr> <tr> <td>Bottle</td> <td>Open</td> </tr> <tr> <td>Nozzle</td> <td>Close</td> </tr> </table>	Spray	Shake	Bottle	Open	Nozzle
Spray	Shake					
Bottle	Open					
Nozzle	Close					
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- In custodial vocational area, tasks with spray bottle can be used. -- At home or CLA chores can be done using spray container. 150	Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 151					

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Niagara"

Level B-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Student will pour cleaning liquids safely.

Procedures -- Teacher will demonstrate: (1) put on rubber gloves (2) shake, if necessary (3) proper opening techniques of the bottle caps (keep face appropriate distance) open close to sink/bucket (4) measure appropriate amount needed (5) pour slowly and carefully (6) proper recapping of bottle. -- Student will follow above procedure.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Bottle of household cleaner Bucket Cap/measurement cup Rubber gloves
	Vocabulary Bottle Cap Shake Measure Pour
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Custodial vocational area, many pouring tasks can be performed. -- In home or CLA, daily activities of living involve pouring, not just for cleaning; that can be good practice.	Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 153

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e

C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.

Instructional Activity "Out of Sight, Out of Mind"

Level B-3

Domain Domestic Maintenance

Goal Area Cleaning

Objective Students will safely store products and clean up.

Procedures -- Teacher will locate and point out safe storage area: (1) heat factor (2) "child safe" area. -- Students will locate storage areas. -- Students will safely place products into storage area. -- Students will clean up cleaning accessories. -- Students will wash hands carefully after using chemical.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Household chemicals
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Custodial training: items should be in a locked cabinet. -- Home or CLA: students who are more capable can check to make sure products are out of reach/out of sight of little brothers or sisters.	Vocabulary Dispose Disposal Storage Flammable heat Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Don't Dump Here"

Level B-4
Domain Domestic Maintenance
Goal Area Cleaning

Objective Student will properly dispose of waste products.

<u>Procedures</u> -- Teacher will discuss importance of proper disposal of cleaning containers. -- Discuss other means of disposal: community collection drives (for paint cans, aerosol cans); municipal disposal centers. -- Demonstrate dilution of leftover product for disposal down drain; discuss what items this is permissible with.	<u>Instructional Environment</u> ☐ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors			
	<u>Materials/Preparation</u> Cleaning containers Household product containers			
	<u>Vocabulary</u> <table style="width: 100%;"> <tr> <td style="width: 50%;">Flammable</td> <td style="width: 50%;">Disposal</td> </tr> <tr> <td>Toxic</td> <td>Dilution</td> </tr> </table>	Flammable	Disposal	Toxic
Flammable	Disposal			
Toxic	Dilution			
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Custodial work area: save toxic items for proper disposal. -- CBI trip to collection agency such as a gas station that accepts motor oil or municipal center for toxic disposal.	<u>Resource Guide</u> Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively			

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e

C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.

Instructional Activity "International Symbol"

Level C-1

Domain	Domestic Maintenance
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Goal Area	Cleaning
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Objective Identify/locate the word "POISON" on product label.

<u>Procedures</u> -- Teacher will write the word "poison" on the blackboard. -- The class will read the word and discuss the meaning. -- The students will be given a ditto with columns of vocabulary words. They will circle the word "poison". -- The teacher will have a variety of products available. The students will circle the word "poison" on the label.	<u>Instructional Environment</u> ☒ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Ditto Household products <u>Vocabulary</u> Poison Pesticides Various cleaning products
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- In home or CLA point out "poison" on labels.	<u>Resource Guide</u> Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Toxic-Schmoxic"

Level C-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Identify/locate the word "TOXIC" on product label.

<u>Procedures</u> -- Teacher will write the word "toxic" on the blackboard. -- The class will read the word and discuss the meaning. -- The students will be given a ditto with columns of vocabulary words. They will circle the word toxic. -- The teacher will have a variety of products available. The students will circle the word "toxic" on the label.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors		
	<u>Materials/Preparation</u> Ditto Household products		
	<u>Vocabulary</u> <table style="width: 100%;"> <tr> <td style="width: 50%;">Toxic Various cleaning products</td> <td style="width: 50%;">Pesticides</td> </tr> </table>	Toxic Various cleaning products	Pesticides
Toxic Various cleaning products	Pesticides		
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- In home or CLA point out "toxic" on labels. 160	<u>Resource Guide</u> Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 161		

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Flame Out"

Level C-3
Domain Domestic Maintenance
Goal Area Cleaning

Objective Identify/locate the word "FLAMMABLE" on product label.

Procedures -- Teacher will write the word "flammable" on the blackboard. -- The class will read the word and discuss the meaning. -- The students will be given a ditto with columns of vocabulary words. They will circle the word flammable. -- The teacher will have a variety of products available. The students will circle the word "flammable" on the label.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Ditto Household products
	<u>Vocabulary</u> Flammable Pesticides Various cleaning products
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- In home or CLA point out "flammable" on labels. 162	<u>Resource Guide</u> Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 163

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Don't Have a Drink"

Level C-4
Domain Domestic Maintenance
Goal Area Cleaning

Objective Identify/locate the word "POISONOUS" on product label.

Procedures -- Teacher will write the word "poisonous" on the blackboard. -- The class will read the word and discuss the meaning. -- The students will given a ditto with columns of vocabulary words. They will circle the word poisonous. -- The teacher will have a variety of products available. The students will circle the word "poisonous" on the label.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Ditto Household products Vocabulary Poisonous Pesticides Various cleaning products
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- In home or CLA point out "poisonous" on labels. 164	Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 183

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Concentration"

Level D-1
Domain Functional Academics
Goal Area Sight Reading

Objective Students will identify key vocabulary words as sight words.

Procedures -- Lay all 12 cards on the table face down. -- Students will take turns by turning over two cards; read cards aloud. -- Identify same or different (same they keep the cards; different they turn cards face down on table). -- Next student begins his/her turn. -- Student with most cards wins.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Oak tag Cut from oak tag 3 x 5 cards Marker Write each vocabulary word on two 3 x 5 cards Contact paper Laminate Vocabulary Toxic Warning Flammable Danger Poison Hazard Caution
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Home, school, work. -- Housekeeping (home or business); maintenance. -- Each student can make one set of the vocabulary words to use as flash cards at home.	Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Don't Breathe the Air"

Level D-2
Domain Functional Academics
Goal Area Reasoning/ Consequences

Objective Explore health/safety issues of using toxic household products (indoor air quality).

Procedures -- Discuss different places with different air qualities (beach, countryside/park, city street, crowded building, etc.). Which air smelled better? -- Teacher should display pictures of a beach, polluted city, farm, etc. -- Read information on indoor pollution. -- Discuss the causes of it and possible ways to change it.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Photos Brochures Vocabulary Air quality Indoor pollution
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) 168	Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively 169

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1e
C.E.E.D. Objective: Discriminate btwn. household toxins & non-toxins.
Instructional Activity "Toxic Household"

Level D-3
Domain General Community Functioning
Goal Area Community Safety

Objective Explore environmental issues of using toxic household products.

Procedures -- Teacher-lead discussion about where oil (or other product) goes after you pour it down the storm drain. -- Student will diagram (or draw a map) to trace the route of disposed oil. -- Teacher will give students the diagram of water's route for students to compare with their own. -- Students will identify ways to lessen or minimize pollution from these products.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Diagram of storm water drainage system Vocabulary Drain Toxic Storm drain
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Trip to community household hazardous waste drop-off and/or used oil collection drop off 170	Resource Guide Let's Reduce and Recycle Complete Book of Home Environmental Hazards Clean Your House Safely and Effectively Indoor Pollution 171

C.E.E.D. Instructional Activity Profile

Recycling 1f

- A-1 Given a toxic floor cleaner and non-toxic floor cleaner, student will choose the non-toxic product.
- A-2 Given a toxic disinfectant and non-toxic disinfectant, student will choose the non-toxic product.
- A-3 Given a toxic toilet cleaner and non-toxic toilet cleaner, student will choose the non-toxic product.
- A-4 Given a toxic furniture polish and non-toxic furniture polish, student will choose the non-toxic product.

- B-1 Student will demonstrate proper use of non-toxic product for cleaning floors.
- B-2 Student will demonstrate proper use of non-toxic disinfectant.
- B-3 Student will demonstrate proper use of non-toxic product for cleaning toilets.
- B-4 Student will demonstrate proper use of non-toxic product for polishing furniture.

- C-1 Student will make and use and alternative natural product for cleaning floor.
- C-2 Student will make and use and alternative natural product for disinfecting surfaces.
- C-3 Student will make and use and alternative natural product for cleaning toilets.
- C-4 Student will make and use and alternative natural product for polishing furniture.

- D-1 Student will compare use of non-toxic and toxic floor cleaners.
- D-2 Explore individual responsibility in making choices and decisions regarding the use of toxic products.

Recycling 1f: Use of non-toxic products

The following is a list of products that can be used as alternatives to commercial preparations for household cleaning. These may be used as a resource for the activities in the section that follows.

ALTERNATIVE HOUSEHOLD CLEANING MATERIALS

Wood Polish: 1 tsp. lemon oil to 1 pint vegetable or mineral oil (or substitute olive oil or linseed oil)

No-Wax Floors - Vinegar and water

Wood Floors - Oil soap or soap and water

Rug Deodorizer - * 2 parts cornmeal to 1 part Borax; let sit 1 hour and vacuum
* Baking soda and vacuum

Windows - 3 tsp. vinegar to 1qt. warm water

Closets - Replace mothballs with dried lavender or cedar shavings

Aluminum Pots - Lemon juice: rub and rinse or soak overnight in vinegar and water

Stainless Steel - Baking soda paste

Copper Pots - Ketchup or lemon juice and salt

Gold - Warm soap and Water

Chrome - vinegar

Brass - Salt, flour and vinegar mixture

Silver - 1 1/2 qts. hot water, 1/2 tbsp. baking soda, 1/2 tbsp. salt; Soak in aluminum pan lined with aluminum foil. Polish with cloth

Oven Cleaners - *Scour often with baking soda and water
*1/4 cup ammonia to 2 cups water in shallow (non -aluminum) pan;
place unwarmed oven overnight

Sink, Tub Toilet and Tile Cleaners - Scour with baking soda or Borax

Drain Cleaner - *Maintain weekly with boiling water
*1/4 cup baking soda and 2 oz. vinegar; rinse with boiling water, or
1/2 cup washing soda and boiling water, or unclog with plunger or
plumber's snake

Disinfectants - Borax or vinegar

Source: "Alternative Cleaning Materials for Use in the Home", Household Hazardous Materials Information Program, Sponsored by the Chester County Board of Commissioners, Chester County Health Department Division of Solid Waste Management and the Chester County League of Women Voters.

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "Floored"

Level A-1
Domain Functional Academics
Goal Area Sight Reading

Objective Given a toxic floor cleaner and non-toxic floor cleaner, student will choose the non-toxic product.

Procedures -- Student will be directed to a cleaning closet (all toxic cleaning products will have been marked with "toxic" and "yuck" stickers and non-toxic with special sticker). -- Student will select the non-toxic floor cleaner. -- Teacher will demonstrate proper application of product in cleaning floor.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Cleaning Products Stickers
	<u>Vocabulary</u> Toxic Non-toxic Floor cleaner
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Vocational Area -- Home, CLA or group home 174	<u>Resource Guide</u> Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards 175

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "Disinfected Alternative"

Level A-2
Domain Functional Academics
Goal Area Sight Reading

Objective Given a toxic disinfectant and non-toxic disinfectant, student will choose the non-toxic product.

Procedures -- Explain that disinfectants are used to clean germs from surfaces. -- Direct student to a cleaning closet. (Toxic products with "yuck" and "toxic" stickers, non-toxic products with special sticker)." -- Student will select the non-toxic disinfectant. -- Teacher will demonstrate proper application of product on surface (table top, desk).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Cleaning Products Stickers Vocabulary Toxic Disinfectant Non-toxic Germs
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational area. -- Home, group home, CLA. 176	Resource Guide Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards 177

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "Clean and Green"

Level A-3
Domain Functional Academics
Goal Area Sight Reading

Objective Given a toxic toilet cleaner and non-toxic toilet cleaner, student will choose the non-toxic product.

Procedures -- Student will be directed to a cleaning closet (Toxic products with "yuck" and "toxic" stickers, non-toxic products with special sticker). -- Student will select the non-toxic toilet cleaner. -- Teacher will demonstrate proper application of product in cleaning toilet.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Cleaning Products Stickers Vocabulary Toxic Non-toxic Toilet Cleaner
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational area. -- Home, group home, CLA. 178	Resource Guide Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards 179

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling If
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "To Pledge or Not to Pledge"

Level A-4
Domain Functional Academics
Goal Area Sight Reading

Objective Given a toxic furniture polish and a non-toxic furniture polish, student will choose the non-toxic product.

<u>Procedures</u> -- Student will be directed to a cleaning closet (Toxic products with "yuck" and "toxic" stickers, non-toxic products with special sticker). -- Student will select the non-toxic furniture polish. -- Teacher will demonstrate proper application of product on furniture.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Cleaning Products Stickers
	<u>Vocabulary</u> Toxic Non-toxic Furniture polish
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Can be done in vocational training area. 150	<u>Resource Guide</u> Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards 181

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "On the Floor"

Level B-1
Domain Vocational
Goal Area Janitorial

Objective Student will demonstrate proper use of non-toxic product for cleaning floors.

<u>Procedures</u> -- Teacher will set up a dirty floor either using dry dirt or liquid dirt. -- Teacher will have student identify proper cleaning procedure (sweep, wipe up, mop). -- Student will identify tool needed for clean up. -- Student will use non-toxic product needed to do clean up.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors								
	<u>Materials/Preparation</u> <table><tr><td>Mops</td><td>Dust pan</td></tr><tr><td>Rags</td><td>Dust brush</td></tr><tr><td>Paper Towels</td><td>Cleaning products</td></tr><tr><td>Broom</td><td></td></tr></table>	Mops	Dust pan	Rags	Dust brush	Paper Towels	Cleaning products	Broom	
Mops	Dust pan								
Rags	Dust brush								
Paper Towels	Cleaning products								
Broom									
	<u>Vocabulary</u> Toxic Non-toxic								
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Vocational -- At home, group home, CLA 182	<u>Resource Guide</u> Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards 183								

C.E.E.D. Instructional Activity Plan

<u>Content Areas:</u>	Recycling 1f
<u>C.E.E.D. Objective:</u>	Identify non-toxic products for household use.
<u>Instructional Activity</u>	"Sanitized"

Level	B-2
Domain	Vocational
Goal Area	Janitorial

Objective Student will demonstrate proper use of non-toxic disinfectant.

<u>Procedures</u> -- Remind students that disinfectants are used to clean germs from surfaces; discuss why this is important (health reasons). -- Each student will identify products and supplies for clean up. -- Each student will use non-toxic product to clean (table, chairs, desks).	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Disinfectant Paper towels Rags <u>Vocabulary</u> Toxic Non-toxic Disinfectant Germs Healthy
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Vocational area -- Home, group home, CLA	<u>Resource Guide</u> Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "Ti-Dee Bowl"

Level B-3
Domain Vocational
Goal Area Janitorial

Objective Student will demonstrate proper use of non-toxic product for cleaning toilets.

Procedures -- Teacher will have student identify proper products and supplies needed for cleaning toilet bowl. -- Each student will use non-toxic product needed to clean toilet.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Toilet bowl cleaner Toilet bowl brush Toilet Vocabulary Toxic Non-toxic Toilet bowl cleaner Toilet bowl brush
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational -- At home, group home, CLA 186	Resource Guide Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards 187

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling If
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "Chair Man"

Level B-4
Domain Vocational
Goal Area Janitorial

Objective Student will demonstrate proper use of non-toxic product for polishing furniture.

Procedures -- Teacher will have student identify proper products and supplies for polishing furniture. -- Each student will <u>use</u> non-toxic product to polish furniture.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	Materials/Preparation Furniture polish Rags Furniture
	Vocabulary Toxic Non-toxic Furniture polish
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational -- At home, group home, CLA 188	Resource Guide Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards 189

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling If
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "More than One Way...#1"

Level C-1
Domain Domestic Maintenance
Goal Area Cleaning

Objective Student will make and use an alternative natural product for cleaning floor.

Procedures -- Teacher will demonstrate mixing natural products and water to make a floor cleaner. Teacher will demonstrate mopping a section of the floor with the product. -- Student will mix their own natural cleaning product. -- Student will use the product to mop the floor.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Natural ingredients Bucket Mop
	<u>Vocabulary</u> Ingredients Natural Mix Combine
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Vocational/custodial training areas -- At home, group home, CLA 190	<u>Resource Guide</u> Hints from Heloise Clean Your House Safely and Effectively 191

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "More than One Way...#2"

Level C-2
Domain Domestic Maintenance
Goal Area Cleaning

Objective Student will make and use an alternative natural product for disinfecting surfaces.

Procedures

- Teacher will demonstrate mixing natural ingredients to make a disinfectant. Teacher will demonstrate cleaning a surface using a rag or paper towel.
- Student will mix their own natural cleaning disinfectant.
- Student will use disinfectant to clean a surface (table, desk).

Instructional Environment

- ☒ Classroom Based ☐ School Community Based
☒ Community Based ☐ Out of Doors

Materials/Preparation

Natural ingredients
Rags
Paper Towels

Vocabulary

Ingredients
Natural
Mix
Combine
Disinfectant

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

- Vocational/custodial training areas
- At home, group home, CLA

Resource Guide

Hints from Heloise
Clean Your House Safely and Effectively

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "More than One Way...#3"

Level C-3
Domain Domestic Maintenance
Goal Area Cleaning

Objective Student will make and use an alternative natural product to be used for cleaning toilet.

Procedures -- Teacher will demonstrate mixing natural ingredients to make a toilet bowl cleaner. Teacher will demonstrate use of product. -- Student will mix their own natural cleaning product. -- Student will use product to clean toilet.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Natural ingredients Toilet bowl cleaner Toilet bowl brush Toilet Vocabulary Ingredients Natural Mix Combine Toilet bowl cleaner
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational/custodial training areas -- At home, group home, CLA 194	Resource Guide Hints from Heloise Clean Your House Safely and Effectively 195

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling if

C.E.E.D. Objective: Identify non-toxic products for household use.

Instructional Activity "More than One Way...#4"

Level C-4

Domain Domestic Maintenance

Goal Area Cleaning

Objective Student will make and use an alternative natural product to be used for polishing furniture.

Procedures -- Teacher will demonstrate mixing natural ingredients for polishing furniture. Teacher will demonstrate use of product. -- Student will mix their own natural furniture polish. -- Student will use the product to polish furniture.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Natural ingredients Rags Furniture Vocabulary Ingredients Natural Mix Combine Polish
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational/custodial training areas -- At home, group home, CLA 196	Resource Guide Hints from Heloise Clean Your House Safely and Effectively 197

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling 1f
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "In Comparison"

Level D-1
Domain Functional Academics
Goal Area Reasoning/Consequences

Objective Student will make and use an alternative natural product to be used for polishing furniture.

Procedures -- Floor will be marked off into two sections. -- Student will locate toxic cleaning product. -- Student will locate non-toxic cleaning product. -- Student will clean one section with toxic product. -- Student will clean one section with non-toxic product. -- Class will then discuss floor results: (1) difference in smells; (2) difference in ease; (3) difference in impact on environment.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Toxic products Floor cleaning tools Non-toxic products Tape Vocabulary Toxic Ease Non-toxic Advantage Compare Disadvantage
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Home, CLA -- Variations of this lesson can be used for cleaning toilets, disinfecting surfaces, polishing furniture.	Resource Guide Green Pages Guide to Safe Products Shopping for a Better Environment Complete Book of Home Environmental Hazards

C.E.E.D. Instructional Activity Plan

Content Areas: Recycling If
C.E.E.D. Objective: Identify non-toxic products for household use.
Instructional Activity "Mail Bag"

Level D-2
Domain Functional Academics
Goal Area Reasoning/Consequences

Objective Explore individual responsibility in making choices and decisions regarding the use of toxic products.

<u>Procedures</u> -- Teacher will write addresses on individual slips of paper and place in container. -- Each student will select an address from container. -- Students will compose a letter to the organization requesting further information on effects of toxic products in the environment. -- When information is received, student will write a report. -- Student will share information with the class.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Paper Envelopes
	<u>Vocabulary</u> Organization
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- At home, group home, CLA -- Vocational 200 -- Student will be able to relate specific changes they have made at home concerning the toxic vs. non-toxic issue.	<u>Resource Guide</u> Citizens for a Better Environment 33 E. Congress, Suite 523 Chicago, IL 60605 201 Environmental Action 1525 New Hampshire, NW Washington, DC 20036

Water & Energy Efficiency



Water and Energy Efficiency: Introduction

Overview

Energy issues received wide scale public attention during the 1970's due to supply disruptions from the Arab oil embargoes. Long lines at the gas pump and escalating prices resulted in a commitment by individuals and policy makers to use energy more efficiently. The potential for saving energy was great because the amount of wasted energy was so large and because the United States has the technological capability to increase energy efficiency. In the short run, home and commercial building energy consumption did drop by 30%. However, during the 1980's ample supplies of fossil fuels and lowered prices caused many people to abandon their energy conservation practices and energy consumption in our country reached record high levels ¹.

Energy is a very complex subject. Teaching students basic energy principles and practices is critical in supporting the development of informed and responsible citizens. Our use of energy impacts on our lives every day. It effects our comfort in our homes and schools. It also effects the portion of our budget that we spend on fuel for our homes and automobiles. As a society, our use of energy effects the quality of our environment and our relations with other nations. Public policy decisions about the quality of air we breathe and the water we drink are directly impacted by our use of energy. Foreign policy decisions of war and peace are decided based on our dependence on imported fossil fuels.

Energy is a term that is frequently used, yet not easy to define. Energy is the ability to do work and work is defined as "the push or pull moving something through a distance." ² Whenever anything happens, it is the result energy making it happen. "Heat, light, and motion are forms of energy that are around us all the time and can easily be observed." ³ Energy heats our homes in the winter and cools them in the summer. In our homes, energy in the form of electricity provides us light and runs our many appliances. The food we eat provides us with the energy we need to live and do our daily activities. Energy allows us to travel from place to place by foot, bicycle, automobile, bus, train or plane.

If we are wise and not wasteful in our use of energy, we benefit because:

- we will spend less money for lighting and using appliances, heating and cooling our homes, and fuel for whatever form of transportation we choose.

- the limited fossil fuel resources on the planet will last longer, allowing us more time to develop renewable resources (solar, wind, biomass).

- our country will be safer because it will be less dependent on imported oil from politically unstable parts of the world.

- fewer pollutants will be emitted into our environment.

Public Policy

National public policy has been established to promote the efficient use of energy in many sectors of our society. President Clinton's Executive Order 12902 established a plan to reduce the energy use in federal and postal service buildings by 30% by the year 2005. The United States Department of Energy (DOE) has established a "Climate Change Action Plan" with the goal of reducing the amount of greenhouse gas emissions to 1990 levels by the year 2000. The plan is multi-faceted and promotes energy efficient practices in the residential, commercial and industrial sectors.

Another federally funded program, the Weatherization Assistance Program (WAP), provides grants to community action agencies for energy efficient improvements in low income homes. Low income people often live in the least energy efficient housing and pay a greater percentage of their income for energy costs. The Weatherization Assistance Program work can improve the comfort level for customers and lower their monthly fuel bills so that they are in a better financial position to keep their homes.

Many state utility commissions from throughout the country have mandated electric utility companies to establish energy efficiency programs that reduce customers' electricity consumption and shift demand to off peak times. These program are called demand side management. Traditionally, utilities addressed projected demand increases by building expensive new power plants. During the late '80s and the '90s, economic and environmental concerns resulted in the implementation of energy efficiency programs for customers and electric rate mechanisms to pay for the programs. Utility demand side management programs can take the form of:

- seals of approval for energy efficient appliances
- discounts and rebates for customers on purchase of compact fluorescent bulbs
- installation of devices to turn off major appliances during specified periods of peak demand
- incentives for builders to design and construct energy efficient homes
- free home energy audits and follow up weatherization work for households heated with electricity.

Home Energy Usage

Home energy consumption accounts for almost 20% of the energy consumed in the United States. The following is a breakdown of home energy usage:

- 55% - space heating and cooling
- 15% - water heating
- 10% - refrigerators and freezers
- 20% - lighting, cooking, and other appliances ⁴

A first step in reducing home heating consumption is understanding the systems that influence your energy consumption patterns:

- The "tightness" of your house will effect the amount of winter warmth (or summer coolness) lost to the outside. Caulking, weatherstripping, storm windows and insulation are all ways of tightening your structure and reducing energy loss.

- Heaters - it is advised that oil heaters be cleaned and checked at least every year and gas heaters every three years.

- Temperature control - it is estimated that you can save 3% or more on your heating bill for every degree you lower your thermostat. Setback thermostats allow you to set a timer that will lower the temperature after you go to bed and increase it before you get up in the morning.

- Distribution - hot air systems use fans to circulate heated air into living spaces through ducts and out registers. You can check the filter monthly, adjust the system to deliver heat where it is needed and seal leaky hot air ductwork. Boilers send heated water or steam to living spaces through pipes and radiators. You can bleed each radiator to remove air from the system, shut off radiators in any room not being used, and insulate hot water pipes in basement and crawl space.

Water heating consumption can be reduced by insulating the heating unit with a hot water heater jacket and turning the thermostat back to 120 degrees or a "normal" or "warm" setting. Repairing leaky faucets and installing low flow showerheads and faucet flow restrictors are also important. Clothes can be effectively cleaned in a washing machine using a cold or warm rather than hot setting.

Refrigerators and freezers made after 1987 tend to be the most energy efficient. Unplug any extra refrigerator or freezer not being used. Be sure to replace one with an efficient model.

For lighting, compact fluorescent bulbs consume a fourth of the electricity of an incandescent bulb and can last more than a decade. The up-front investment in a compact fluorescent bulb is much higher (\$10-\$20) than incandescent ones. Compact fluorescent bulbs work best when they are on for at least three hours at a time. Select appliances that are energy efficient and use them only when needed. ⁵

Energy Efficient Behavior

It is clear that there is a wide range of energy efficient choices and practices for homeowners ranging from no or low cost to much higher cost. Studies have shown that given two similar houses and heating systems, wide variations in energy use can result from behavioral rather than structural differences. The following curricular materials focus on nurturing energy efficient behavior in students such as turning off lights, appliances and water when not being used.

¹ *Energy Conservation News*, April 1994, page 7.

² *Our World of Energy*, Energy Education Advisory Council 1977, page 2.

³ *Pennsylvania Elementary Energy and Environment Science Activities*, Level 1, Pennsylvania Energy Office, June 1991, page 1-1.

⁴ PR Newswire Association, Inc., "Home Builders: Oil Crisis in 1973, Spawned More Energy Efficient Homes." October 26, 1993, page 2.

⁵ *Your Conservation Handbook*, Energy Coordinating Agency of Philadelphia, Philadelphia, PA.

Water Overview

Water is the common denominator for all living things. It is the primary component of living organisms, comprising 60% - 70% by weight. It covers 75% of the earth's surface, playing a key role in regulating the world's surface temperatures. It is also crucial to the process of photosynthesis and primarily determines the distribution of plant, animal and human populations around the globe.

With water so omnipresent, it is sometimes difficult to see why water conservation is important. But the problem with water is not supply. Earth has practically the same amount of water today as it did in the day when dinosaurs roamed the earth. Ninety-seven percent of that, however, is salt water. Of the remaining 3% that is fresh, two thirds exists in the form of ice. An additional one-half percent is so deep below the earth's surface that it is economically infeasible to recover. But even with only one-half of one percent the world's water being usable, supply is not the problem. The real problem with water is the increasing number of people using it and its degradation.

Sources of potable and agricultural-grade water, both above the ground in rivers and below the ground in aquifers, are suffering from overpopulation and pollution. The scope of the problem goes beyond satisfying thirst: unsanitary water is one of the world's most serious health problems. The World Bank reports that approximately one billion people in developing countries have no access to clean water at all.

In the United States, the problem is of a different nature. The U.S. draws 339 billion gallons of ground and surface water every day, using three times as much water per person than the average European country and astronomically more than developing countries. Although 4 trillion gallons of water falls on the U.S. in the form of precipitation daily, much of that disappears in evaporation and run-off, and our rivers and aquifers are being dangerously fouled and depleted. With increasing pressure being put on water use by development, water conservation becomes all important.

C.E.E.D. Instructional Activity Profile

Water and Energy Efficiency 2a

- A-1 Identify water faucets in bathroom and kitchen.
- A-2 Demonstrate turning on and turning off water.
- A-3 While toothbrushing, demonstrate water saving behavior.
- A-4 While shaving, demonstrate water saving behavior.

- B-1 While showering, demonstrate water saving behavior.
- B-2 While washing dishes, demonstrate water saving habits.
- B-3 While using toilet, identify when it is necessary to flush.

- C-1 Identify water saving equipment for sinks and discuss need for it.
- C-2 Identify water saving equipment for the bathroom/toilet and discuss need for it.
- C-3 Identify water saving equipment for outdoor hoses and discuss need for it.
- C-4 Perform an "water audit" at home.

- D-1 Install water saving equipment for sinks and discuss why.
- D-2 Install water saving equipment for bathroom/toilet and discuss why.
- D-3 Install water saving equipment on outdoor hoses and discuss why.
- D-4 Investigate types of water-saving appliances.

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Demonstrate water-saving habits.
Instructional Activity "Where's the Water?"

Level A-1
Domain Personal Maintenance
Goal Area Toileting; Grooming

Objective Identify water faucets in bathroom and kitchen.

Procedures -- Put pictures of the different faucets (single lever arm, two knob/handle faucets) on the board or wall. -- Direct students to go to the board and point to the faucet. Indicate that this is where we get water. -- Take pictures down and take students to the bathroom and kitchen areas (A.D.L. room). -- Give student the picture which matches a type of faucet in the room and direct them to take it to the matching real faucet.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Pictures of single level faucets and two knob/handle faucets (can be found in various catalogs) Access to bathroom, daily living room
	<u>Vocabulary</u> Water Faucet Bathroom Kitchen
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> --This can be done with students at their home or group home, or at work/workshop. --Take a trip to a plumbing supply store/home center to see all of the types of faucets.	<u>Resource Guide</u> Household Ecoteam Workbook Water National Geographic "Water"

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a

C.E.E.D. Objective: Demonstrate water-saving habits.

Instructional Activity: "Go with the Flow"

Level: A-2

Domain: Domestic Maintenance/Personal Maintenance

Goal Area: After Meal Clean-up/Toileting

Objective: Demonstrate turning water on and off with various kinds of faucets.

Procedures -- Go to sink with a single-lever faucet (usually in the daily living room kitchen sink). -- Explain and demonstrate pushing up and to the left and right to turn on the water flow. -- Allow students to practice the same motion, pushing to the left (hot) and right (cold) when directed. -- Go to sink with knob/handle style faucet. -- Explain and demonstrate turning on hot and cold water. -- Allow students to practice when directed. 211	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Access to bathroom, A.D.L. room Red & Blue stickers (optional) Vocabulary <table> <tr> <td>On</td><td>Kitchen</td></tr> <tr> <td>Off</td><td>Bathroom</td></tr> <tr> <td>Water</td><td></td></tr> <tr> <td>Faucet</td><td></td></tr> </table> 212	On	Kitchen	Off	Bathroom	Water		Faucet	
On	Kitchen								
Off	Bathroom								
Water									
Faucet									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Color-code hot and cold sides with red and blue stickers, if faucets do not already have some type of color-coding on it. -- Various schools/homes/group homes may have other similar types of faucets.	Resource Guide Household Ecoteam Workbook Water National Geographic "Water"								

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Demonstrate water-saving habits.
Instructional Activity "A Close Brush"

Level A-3
Domain Personal Maintenance
Goal Area Toileting

Objective Demonstrate water saving habits while tooth brushing.

Procedures -- Take students to bathroom or A.D.L. room with bathroom; Bring toothbrushes, toothpaste at appropriate time (after snack, after lunch). -- Direct students through procedure on a simulation/demonstration without toothpaste: * toothpaste on brush * turn water on to wet brush * turn water off * brush teeth with water off * when ready to rinse, turn water off * turn water off again when finished rinsing -- Do the actual brushing with toothpaste.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Toothbrush Toothpaste Access to bathroom
	<u>Vocabulary</u> Tooth brushing Water Saving Faucet
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Send home a checklist for parents/counselors/etc. to see if students perform water-saving procedures correctly. 213	<u>Resource Guide</u> Household Ecoteam Workbook Water National Geographic "Water" 214

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a

C.E.E.D. Objective: Demonstrate water-saving habits.

Instructional Activity "Shave and Save"

Level A-4

Domain Personal Maintenance

Goal Area Toileting

Objective Demonstrate water saving behavior while shaving.

Procedures -- Take students to bathroom or A.D.L. room with bathroom. -- Demonstrate/explain the following shaving procedure: * Turn water to desired temperature and fill sink about 1/4 full * Turn water off * Splash water on face to wet, apply cream, wet razor and shave, rinsing razor in water in the sink * Do not turn on water until ready to rinse face at the end -- Allow students to perform activity as appropriate.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Shaving cream Razor Access to bathroom Vocabulary Shaving Saving Razor Shaving cream Water
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Send home a copy of the procedure for parents/counselors with students to see if the procedure is performed correctly at home. 215	Resource Guide Household Ecoteam Workbook Water National Geographic "Water" 216

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Demonstrate water-saving habits.
Instructional Activity "Wet-down, Soap-up, Rinse-off"

Level B-1
Domain Personal Maintenance
Goal Area Toileting

Objective Demonstrate water-saving behavior when showering.

<u>Procedures</u> -- Take students to shower room, or simulate this activity in classroom, if possible. -- Demonstrate/explain the following procedure using the title of this activity as a simple procedure for the students: * Undress and enter shower * Turn on water to desired temperature and get completely wet * Turn water off * Take soap and lather completely * Turn water on again to rinse	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- A low-flow shower head with an on-off switch makes this much more convenient to do as it maintains water temperature setting. -- Investigate a low-flow shower head for use at home. -- Do similar procedure for shampooing.	<u>Materials/Preparation</u> Access to shower room Soap Towel Wash cloth <u>Vocabulary</u> Shower Soap Rinse "Wet-down"
<u>Resource Guide</u> Household Ecoteam Workbook Water National Geographic "Water"	213

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Demonstrate water-saving habits.
Instructional Activity "What a Dish"

Level B-2
Domain Domestic Maintenance
Goal Area After Meal Clean-up

Objective Demonstrate water-saving behavior while washing dishes.

Procedures (This activity is appropriate for hand-washed dishes, not a dishwasher activity.) -- At an appropriate time, (after a cooking/eating skills lesson in A.D.L. room), fill sink with soapy water and put in dirty dishes, turning water off. Wash dishes and place them on a drain-board. -- Do not turn on water again until ready to rinse. Rinse dishes, turning off water when it is not in use. -- Give students 3-step overview: FILL-WASH-RINSE	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Access to Daily Living Room--kitchen Dirty dishes Dish soap Sponge
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- A low-flow faucet with an on-off switch makes it easier, if one is available, so that dishes can be rinsed after each dish is washed without wasting water. 219	Vocabulary Dishes Wash Faucets Water-saving Resource Guide Household Ecoteam Workbook Water National Geographic "Water" 220

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Demonstrate water-saving habits.
Instructional Activity: "Flushed with Pride"

Level: B-3
Domain: Personal Maintenance
Goal Area: Toileting

Objective: Demonstrate when it is not necessary to flush toilet after use.

Procedures -- Place a small amount of yellow food color in cup of water to approximate the color of a small amount of urine in a toilet bowl. -- Make 2 other cups with much more food color to approximate the color of much larger discharges of urine into a toilet bowl. -- Explain that if the water is the color of the light yellow cup, it does not need to be flushed. If it matches the color of the darker cups, it does need to be flushed. -- Have students point to the lightest cup. -- Take students into bathroom and pour into three different toilet bowls and ask students which one to flush. Let them flush it.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Access to bathroom (optional) Yellow food color 3 clear plastic cups
	Vocabulary Toilet Flush Pride
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) NOTE: Some teachers feel that it is unsanitary not to flush the toilet after every use, but small amounts of urine in the bowl for short periods of time pose no health risk. If you are not comfortable advocating this practice, skip this activity.	Resource Guide Household Ecoteam Workbook Water National Geographic "Water" 222

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Demonstrate water-saving habits.
Instructional Activity "Aerator"

Level C-1
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Identify water-saving equipment for sinks and discuss the need for it.

Procedures -- Write "Low-Flow" and "Faucet Aerator" on separate index cards. Identify meanings. -- Write "Faucet Cap" on index card and identify meaning. -- Ask students to identify the words. -- Explain low-flow aerators save water. -- Show pictures or actual equipment of the 2 kinds of faucet caps, identify each. -- Have students identify the low-flow faucet aerator. Let them give reasons why they should use one.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Students can check at home (group home, CLA) to see if they have low-flow aerators at home and report back to class to see how many homes have these water-saving features. 223	Materials/Preparation Index cards Markers Picture of regular faucet cap, or actual faucet cap Picture of low-flow faucet aerator or actual faucet aerator Vocabulary Sink Faucet Aerator Low-flow Water-saving Resource Guide Household Ecoteam Workbook Water National Geographic "Water" 224

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Identify water saving habits.
Instructional Activity "Bottle and Dam"

Level C-2
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Identify water saving equipment for the bathroom.

Procedures -- On a table, place the beverage bottle and tank dam (or picture). -- Describe each item for the students. -- Let students guess what the bottle might be used for or how the dam might be used. -- Have the students fill one bucket with water all the way. Fill the beverage bottle and put on the cap and place it in the other bucket. Fill the second bucket to the same level as the first. -- Remove beverage bottle and compare water levels. Identify the difference as the amount of water saved every time the toilet is flushed.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors							
	Materials/Preparation Empty 1-liter beverage bottle with cap Picture of, or actual, toilet tank dam 2 Small buckets							
	Vocabulary <table border="0"> <tr> <td>Tank</td> <td>Flush</td> </tr> <tr> <td>Toilet</td> <td>Low-flow</td> </tr> <tr> <td>Reduce</td> <td>Shower head</td> </tr> <tr> <td>Dam</td> <td></td> </tr> </table>	Tank	Flush	Toilet	Low-flow	Reduce	Shower head	Dam
Tank	Flush							
Toilet	Low-flow							
Reduce	Shower head							
Dam								
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) - -If a toilet tank dam is available, perform a similar activity using 2 trays with part of one tray blocked with the tank/dam. 225	Resource Guide Household Ecoteam Workbook Water 226							

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Identify water saving habits.
Instructional Activity "Squirt"

Level C-3
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Identify water saving equipment for outdoor hoses.

Procedures -- Attach hose to outdoor faucet and stretch out full length. -- Place end of hose into a bucket. -- Direct student to walk back to faucet to turn on water, then walk slowly back to bucket and then back to faucet to turn off water. Mark on bucket how much water was in it and dump it out. -- Attach nozzle to hose and place nozzle in bucket. Repeat above procedure. (There will be no water in bucket). -- Students should observe the mark as the amount of water saved by using the nozzle. -- Ask students to identify which uses more water, hose with or without nozzle.	Instructional Environment ☐ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Marker Garden Hose Pistol-type water nozzle that shuts off automatically upon release of handle Bucket Access to outdoor faucet Vocabulary Hose Nozzle Automatic
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- If your school does a car wash as a fund-raiser, use the above idea in actual use of the hose. While car washing, save water in buckets while the nozzle is not on for later use in washing cars. Do this for about half the time and note how many buckets of water could be saved.	Resource Guide Household Ecoteam Workbook Water National Geographic "Water"

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Identify water saving habits.
Instructional Activity "Water Audit"

Level C-4
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective To perform a personal "water audit" of water use at home.

Procedures -- Students will take home a "water-audit" sheet to monitor their own use of water at home based on the following 3 activities: * Flushing toilet * Taking a bath * Taking a shower -- On the sheet, write each activity, and leave a line next to it for students to write down the number of times they perform each activity over a weekend. Have them bring sheets back to school on Monday. -- Direct students to multiply each flush x 5 gallons, each bath x 36 gallons, and each shower x 25 gallons. Total each student's "Audit" and compare.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Teacher-made water-audit sheet Vocabulary Audit Bath Gallon Shower Flush
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- A more sophisticated audit can be performed based on student ability: total uses for all family members and compare quarterly bills and compare water use by season of the year. 229	Resource Guide Household Ecoteam Workbook Water National Geographic "Water" 239

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a

C.E.E.D. Objective: Identify water saving habits.

Instructional Activity "Aeration"

Level D-1

Domain Domestic Maintenance

Goal Area Home Maintenance

Objective Demonstrate the ability to install water saving equipment on sinks.

<u>Procedures</u> -- This activity should occur in the daily living room kitchen area. -- If sink already has a water-saver on it, remove it prior to students coming, and replace with original one. -- At the sink, demonstrate what is meant by turning clockwise, then counter-clockwise. -- Direct a student to hold the tip of the faucet and turn it counterclockwise to remove it. -- Take aerator and attach by turning in a clockwise motion until secure. -- Give each student a chance to practice.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Water-saving faucet aerator <u>Vocabulary</u> Water-saving Aerator Faucet Clockwise Counter-clockwise
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Students can ask parents if they can replace faucets with water-saving aerators at home, their group home, or CLA. If parents can purchase it send a note home asking students to install it, if appropriate. 231	<u>Resource Guide</u> Household Ecoteam Workbook Water National Geographic "Water" 232

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Identify water saving habits.
Instructional Activity: "Bottle-Up"

Level: D-2
Domain: Domestic Maintenance
Goal Area: Home Maintenance

Objective: Demonstrate the ability to install water saving equipment in the bathroom.

<u>Procedures</u> -- Direct student to take an empty 1-liter beverage bottle and fill it with water and securely attach cap. -- Take bottle to toilet tank. Remove tank lid and have student place this bottle in a corner of the tank that won't interfere with the operation of the level mechanism. Observe the rise in the water level and mark. -- Flush toilet and compare water level to the mark. (It will be lower.) Explain that this is how much water the bottle displaced, or how much water is saved with each flush.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Empty 1-liter beverage bottle with cap Access to a toilet with a tank Pencil or marker
	<u>Vocabulary</u> Toilet Tank Displace Flush
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Water can also be saved in the toilet tank by using a "tank dam", if available. Students can place the dam and observe amount of water saved. 233	<u>Resource Guide</u> Household Ecoteam Workbook Water National Geographic "Water" 234

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Identify water saving habits.
Instructional Activity "Tight Squeeze"

Level D-3
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Demonstrate the ability to install water saving equipment on outdoor hoses.

Procedures -- Attach garden hose to outside faucet, or allow students to do this if hose is not already connected. Make sure nozzle is not on yet. -- Give student the nozzle, direct them to screw the nozzle on in a clockwise fashion to the end of the hose. -- Have another student turn on the faucet. -- Demonstrate that water only comes out when the handle is squeezed and explain that it turns off when you let go, thereby saving water. Allow students to practice. (Don't get wet!)	Instructional Environment ☐ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Garde hose Pistol-type nozzle with automatic shut-off Access to outdoor faucet Vocabulary Hose Clockwise Nozzle Pistol-type Automatic
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- If hose is near a garden or near other plants (bushes, etc.), have students practice in actual use of the hose and nozzle in watering the plants or garden. It could also be used while rinsing out large trash cans during vocational activities, or at a school car-wash fund raiser.	Resource Guide Household Ecoteam Workbook Water National Geographic "Water"

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2a
C.E.E.D. Objective: Identify water saving habits.
Instructional Activity "Bottle and Dam"

Level D-4
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Investigate types of water saving appliances for the home.

Procedures -- Ask students to think of appliances in the home that use water. (They should at least come up with a dishwasher and a washing machine.) -- Explain that different machines use different amounts of water. -- Using catalogs or advertisements, find water-use ratings for above. Try to compare different brands. Check to see if they have a water-saving setting feature on each. (Washing machines should have settings for different size loads.)	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Appliance catalog (Any commercial appliance catalog or advertisement should list a variety of appliance with water-saving features.) Vocabulary Appliances Washing machine Dishwasher
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Ask students to see if they have either appliance at home, and if so, to write down the settings and bring it in to school. -- Compare from student to student. -- Go to an appliance store/department store and look at features on washing machines and dishwashers for water-saving features.	Resource Guide Household Ecoteam Workbook Water National Geographic "Water" 233

C.E.E.D. Instructional Activity Profile

Water and Energy Efficiency 2b

- A-1 Identify appliances/tools that use electricity as a power source.
- A-2 Identify on-off switch on electrical appliances/tools/lights.
- A-3 Identify on-off positions using colors or words on appliances/tools/lights.
- A-4 Identify wall outlet and plug in appliances/tools/lights.

- B-1 Determine if an appliance/tool/light is plugged in or not.
- B-2 Demonstrate appropriate and safe methods for plugging in appliances/tools/lights.
- B-3 Demonstrate appropriate use of on-off switches on lights and appliances.

- C-1 Demonstrate appropriate use of gradient switches on light and appliances.
- C-2 Turn off lights and appliances using a variety of switches when not in use (TV, radio, lights, etc.).
- C-3 Identify energy saving devices for lights and appliances (energy saving bulbs, timers, etc.).
- C-4 Install energy saving devices on lights and appliances (energy saving bulbs, timers, etc.).

- D-1 Monitor home appliance, light and energy use.
- D-2 Identify personal actions people can take to improve energy conservation.
- D-3 Explain ways in which energy is produced and used.

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Electric Things"

Level A-1
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Identify appliances/tools that use electricity as a power source.

Procedures -- The following items will be placed in or by a table: lamp, toaster, hammer, microwave, battery clock, vacuum cleaner, manual pencil sharpener, electric clock, manual razor, electric shaver (others may be substituted). -- Students will either choose items with an electrical cord by pointing to it, or answer "yes" or "no" when asked if the item uses electricity.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Electric items (lamp, toaster, microwave, clock, vacuum, shaver, etc.) Manual items (hammer, battery clock, razor, pencil sharpener, etc.)
	Vocabulary Electric Manual Battery-operated Power source
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Items can also be identified or sorted according to whether or not they use electricity by using pictures. -- Home 240 --Work	Resource Guide Pennsylvania Environmental Education Activities Guide 241

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Where Do I Turn?"

Level A-2
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Identify off-on switch on electrical appliances/tools/lights.

Procedures -- Student will be shown a sample of on-off switches (either actual switch or picture). -- Objects using the various types of switches will be presented. -- Students will be asked to point to the place on the object where it is turned on and off. -- Student will point to the location of the switch on the corresponding object. -- (Can also be done with pictures) Example: DLM	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Pictures of various switch-types Pictures of objects or the object itself (lamps, wall switch, vacuum, washer-dryer, oven, etc.)
	<u>Vocabulary</u> Switch Cord On Off
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home appliances -- Work study, vocational	<u>Resource Guide</u> Pennsylvania Environmental Education Activities Guide PECO Energy - Energy Guide 243

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b

C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.

Instructional Activity "Turn Me On--Turn Me Off"

Level A-3

Domain Domestic Maintenance

Goal Area Use of Appliances

Objective Identify off-on positions, using colors or words on appliances/tools/lights.

<u>Procedures</u> -- Place red and green colored dots at the "ON" and "OFF" positions of various types of switches listed in A-2. -- Turn some switches to "ON" position and some to "OFF" position. -- Indicate to student "red means OFF, green means ON". -- Student must go to switch and indicate which way the switch is set by stating or pointing. -- Do same with words "ON" and "OFF" on the switch if it does not have it on it already.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Red and green dots Various switch types "ON" and "OFF" on small labels <u>Vocabulary</u> Red Switch Green On Off
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home -- Work - vocational training - tool use	<u>Resource Guide</u> Pennsylvania Environmental Education Activities Guide PECO Energy - Energy Guide

244

245

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b

C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.

Instructional Activity "Plug Me In #1"

Level A-4

Domain Domestic Maintenance

Goal Area Use of Appliances

Objective Identify wall outlet and plug on appliances/tools/lights.

<u>Procedures</u> -- Either using pictures of outlets or actual outlets, use a blue-colored dot to place on it. -- Also place a blue dot on plug of an appliance or light. -- Label each item appropriately with a sticker with "Plug" or "Outlet" written on it. -- Ask student to locate the "blue dot" on the wall, then on the appliance or light. -- Ask student to locate "plug" and "outlet".	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home or group home -- Work-vocational training 246	<u>Materials/Preparation</u> Blue adhesive dots Labels Plugs (or appliances with plugs) or pictures Wall outlet (or picture)
<u>Resource Guide</u> Pennsylvania Environmental Education Activities Guide PA- PUC Consumer Guide	<u>Vocabulary</u> Plug Outlet

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Plug Me In #2"

Level B-1
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Demonstrate if an appliance/tool/light is plugged in or not.

<u>Procedures</u> -- Using items with blue dots from A-4, have students indicate the outlet and plug. -- When the two items with dots are together (that is, when the plug is in the outlet) have student indicate by saying "in". -- Take plug out and lay on floor near outlet have student say "out". -- (Make sure dot on plug and dot on outlet align so that they are together when plugged in.)	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Electrical plug Wall Outlet Blue adhesive dots (if needed) <u>Vocabulary</u> Plug Outlet
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home or group home -- Work-vocational training 248	<u>Resource Guide</u> Pennsylvania Environmental Education Activities Guide PA- PUC Consumer Guide 249

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Plug Me In #3"

Level B-2
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Demonstrate appropriate and safe methods for plugging in appliances/tool/lights.

Procedures -- Student will take a plug with two prongs and a plug with 3 prongs and go to a wall outlet. -- If outlet is 2-prong, student will plug in the 2-prong plug. -- If outlet is 3-prong, student will place in a 3-prong outlet and then remove it, then place 2-prong plug in outlet. -- Let student try to place a 3-prong plug into 2-prong receptacle to indicate that it can't be done.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> 2-prong plug 3-prong plug 2-prong outlet 3-prong outlet
	<u>Vocabulary</u> Plug Outlet Prong
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home or group home -- Work-vocational training 250	<u>Resource Guide</u> Pennsylvania Environmental Education Activities Guide PA- PUC Consumer Guide 251

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Turn Me On--Turn Me Off" #2

Level B-3
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Demonstrate appropriate use of on-off switches on lights and appliances.

<u>Procedures</u> -- Having located switch, student will push a toggle-type wall switch up to "ON" and down to "OFF". -- Having located switch, student will grasp and turn a cord-switch to "ON" and "OFF". -- Student will push in a button on lamp to turn it "ON" and "OFF". -- Student will turn switch on a 3-way lamp switch to turn on, adjust, and turn off.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Toggle switch Cord switch Button lamp switch 3-way switch
	<u>Vocabulary</u> Cord Toggle 3-way
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home or group home -- Work-vocational training 252	<u>Resource Guide</u> Pennsylvania Environmental Education Activities Guide PA- PUC Consumer Guide 253

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Shades of 'On'"

Level C-1
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Demonstrate appropriate use of gradient switches on lights and appliances.

Procedures -- Student will push in dimmer to turn on a light, then turn dial to adjust to desired brightness and push again to turn off. -- On an oven, student will turn oven dial to turn on to desired temperature (or temperature given by teacher) and turn back to off when finished. If a separate oven "on-off" switch is present, first turn to "oven on", then set temperature dial. -- On an iron, student will turn dial to turn on and set to desired setting, then turn to off again.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Home or group home -- Work-vocational training 254	Materials/Preparation Oven Iron Dimmer switch Vocabulary Gradient Dimmer Resource Guide Pennsylvania Environmental Education Activities Guide PA- PUC Consumer Guide 255

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Lights Out"

Level C-2
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Turn off lights and appliances using a variety of switches when not in use (TV, radio, lights, etc.).

<u>Procedures</u> -- At the end of the A.D.L. independent living period, student will turn off all appliances, radio, TV and lights before leaving the room.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Electrical items already present in independent living center
	<u>Vocabulary</u> Appliance On-Off
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home or group home -- Work-vocational training	<u>Resource Guide</u> PECO - Energy Guide PA- PUC Consumer Guide

256

257

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Energy Savers" #1

Level C-3
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Identify energy-saving devices for lights and appliances (energy-saving bulbs, timers, etc.).

Procedures -- Put a combination of energy-saving light bulbs, regular light bulbs, light timer, and egg timer on a table. -- Indicate to students which are which. -- Have student go to table and pick out energy-saving bulb, regular bulb, light timer, and egg timer. -- Can also be done using pictures of the same.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Energy-efficient light bulb (or picture) Regular light bulb (or picture) Light timer (or picture) Egg timer (or picture)
	Vocabulary Efficient Bulb Timer
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Home or group home 258	Resource Guide PECO - Energy Guide 259

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Energy Savers" #2

Level C-4
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Install energy-saving devices for lights and appliances (energy-saving bulbs, timers, etc.).

Procedures -- Student will remove a regular light bulb from lamp, unscrewing it. -- Will screw in the energy-efficient light bulb in its place. -- Set on-off times on a light timer, and set for present time. -- Unplug lamp from wall outlet. -- Plug lamp into timer outlet. -- Plug timer into outlet.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors	
	<u>Materials/Preparation</u> Energy-efficient light bulb Light timer	
	<u>Vocabulary</u> Energy-Efficient Light Bulb Timer	
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home or group home 260	<u>Resource Guide</u> PECO - Energy Guide 261	

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Meter Man"

Level D-1
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Monitor home appliance, light and energy use.

Procedures -- At the same time every evening, student will take a meter reading on the electric meter (parents may help them locate it) and the gas meter (if appropriate) and record it on a log form. -- On a separate sheet, student will record use of appliances (dishwasher, washer, dryer, etc.). -- Student will compare days to examine effect of using appliances on energy use in the home. -- Teacher should review meter reading techniques.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	Materials/Preparation Form for meter readings Form for appliance use Pencil or pen
	Vocabulary Electric Gas Meter Digit
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- If school has meters that students can have access to, this can be done at school. 262	Resource Guide Pennsylvania Environmental Education Activities Book 263

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Energy Detective"

Level D-2
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Identify personal actions people can take to improve energy conservation.

Procedures -- Given a diagram of a house with energy-using areas indicated below, students will develop at least one idea on how energy could be saved: * hot water/water use * electricity use * air flow (drafts-leaks) * heating	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Diagram of house showing energy use areas and numbers indicating different areas Blank, ruled paper Pencil or pen
	Vocabulary Furnace Hot-water heater Draft Insulation
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- School diagram -- Work-site 264	Resource Guide Your Conservation Handbook - Energy Coordinating Agency of Philadelphia 265

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2b
C.E.E.D. Objective: Demonstrate efficient use of appliances and lights.
Instructional Activity "Energy Match"

Level D-3
Domain Domestic Maintenance
Goal Area Use of Appliances

Objective Explain ways in which energy is used and produced.

Procedures -- Students will be given a sheet with pictures of means of energy production and one with uses of energy. -- Students cut out pictures on second page and glue them in a space under the corresponding energy production. -- Students write a sentence underneath that describes the means of production and how it is used in the corresponding picture.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Paper containing pictures of means of energy production Paper with pictures of energy use Scissors Glue Pencil/pen
	Vocabulary Production Hydroelectric Coal-fired
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Field trip to production plant for electricity (hydroelectric, coal-fired, etc.) 266	Resource Guide Pennsylvania Environmental Education Activities Book 267

C.E.E.D. Instructional Activity Profile

Water and Energy Efficiency 2c

- A-1 Identify seasons relevant to energy use (heating seasons, cooling seasons).
- A-2 Identify heating devices/sources.
- A-3 Identify cooling devices/sources.
- A-4 Identify heating/cooling controls in the home (thermostat for heater, AC, fan on-off and speed).

- B-1 Set thermostats to proper energy conservation temps at appropriate season.
- B-2 Demonstrate appropriate use of window shades in summer and winter.
- B-3 Demonstrate proper window ventilation in summer, closed in winter.
- B-4 Make sure doors are open or closed as seasonally appropriate for heat retention or for ventilation.

- C-1 Identify weather proofing and sealing devices on window and doors.
- C-2 Install weather proofing and sealing devices on window and doors.
- C-3 Identify programmable thermostats.
- C-4 Use appropriately a "programmable" thermostat.

- D-1 Monitor home energy use during heating/cooling seasons.
- D-2 For all seasons, demonstrate proper hot-water heater settings and insulation.

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "Energy Seasons"

Level A-1
Domain Mathematics
Goal Area Calendar Skills

Objective Identify seasons relevant to energy use (heating seasons, cooling seasons).

Procedures -- Student will be given a circular drawing depicting the 4 calendar seasons of the year, 1 season in each quarter of the circle. -- Ask students "Which parts of the year are warm or hot, which are cool or cold?" -- Students draw a dotted line through the circle from half-way in fall to half-way in spring. -- Color the fall-winter-spring part red to indicate heating season; color the summer part blue to indicate the cooling season.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Worksheet Crayons or markers Pencil Pen
	Vocabulary Season Calendar Energy
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Most appropriate for eventual use at home, or for individuals living in a group home setting or community living arrangement.	Resource Guide Fifty Simple Things You Can Do PA Elementary Energy and Environmental Science Activities Book 270

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "I'm Hot"

Level A-2
Domain Functional Academics
Goal Area Sight Reading

Objective Identify heating devices/sources.

Procedures

-- Using pictures and a list of the names, students will write the appropriate name of the following heating sources under the appropriate picture:

- * Furnace
- * Radiator
- * Electric Space Heater
- * Hot Air Vent
- * Fireplace

Instructional Environment

- ☒ Classroom Based ☐ School Community Based
☐ Community Based ☐ Out of Doors

Materials/Preparation

Worksheet
Pencil/pen

Vocabulary

Furnace Fireplace
Radiator
Space Heater
Vent

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

-- Take a field trip to a heating plant (in building, in large complex, or to the heater in the basement).

271

Resource Guide

Fifty Simple Things You Can Do
PA Elementary Energy and Environmental Science Activities Book

272

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "I'm Cold"

Level A-3
Domain Functional Academics
Goal Area Sight Reading

Objective Identify cooling devices/sources.

Procedures -- Using pictures and a list of corresponding names, students will write the appropriate name of the following cooling devices under the appropriate picture: * Room Air Conditioner * Central Air Conditioning Unit * Fans (Ceiling, Oscillating, Window, Stand-up) -- Identify as many of the same items as you can find around the school building.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Worksheet Pencil/pen
	Vocabulary Air Conditioner Central Oscillating Ceiling
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Have the students find as many of the same items as they can at home, group home, or community living arrangement. 273	Resource Guide Fifty Simple Things You Can Do Your Conservation Handbook 274

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "Where's the Dial?"

Level A-4
Domain Functional Academics
Goal Area Sight Reading

Objective Identify heating/cooling controls in the home (thermostat for heater, A.C., fan on-off & speed).

Procedures

-- In a room with a thermostat (A.D.L., workshop, etc.), give students an array of wall switch, electrical outlet, and a thermostat. Have student color a label half red and half blue (for Hot-Cold control).

-- Ask student to place the label on the thermostat.

-- (Can also be done with pictures of the same.)

-- Repeat with an air conditioner (if available) or picture.

Instructional Environment

- ☒ Classroom Based ☐ School Community Based
☐ Community Based ☐ Out of Doors

Materials/Preparation

Room with thermostat, wall switch, outlet
Labels
Crayons or markers
Worksheet with pictures of items above

Vocabulary

Thermostat
Air Conditioner
Temperature

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

-- Home or group home.

-- Workshop or worksheet.

275

Resource Guide

PA Elementary Energy and Environmental Science Activities Book
Your Conservation Handbook

276

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "Dial It In"

Level B-1
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Set thermostats to proper energy conservation temperatures at appropriate seasons.

Procedures -- On a thermostat, have student identify "68° ". (Usually approximate - just under 70°). -- Student will color a small label red. -- Place the red label at the "68° " mark. -- Align thermostat set arrow with the red label. -- Do same for air conditioner thermostat at the "78° " mark (if numbers are not available, then set at "Low Cool").	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Label Crayon or marker Access to thermostat and air conditioner
	<u>Vocabulary</u> Seasonal Setting
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home or group home. 277 -- Work - vocational training. -- Have students find thermostat settings at the locations listed above.	<u>Resource Guide</u> Fifty Simple Things You Can Do Your Conservation Handbook 278

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c

Level B-2

C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.

Domain Domestic Maintenance

Instructional Activity "Sun & Shade"

Goal Area Home Maintenance

Objective Demonstrate appropriate use of window shades in summer and winter.

<u>Procedures</u> -- Show students pictures of outdoor scenes of the four seasons. -- For each season, have student set shades in classroom (A.D.L., etc.) windows: * for summer - shades drawn against the sun * for winter - shades open to let sun in to warm the room * for fall and spring - close if hot, open if cool, based on the outside temperature -- This activity can be done every morning with actual setting for given time of the year. -- Students can use a worksheet to practice matching pictures.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors <u>Materials/Preparation</u> Windows with shades Pictures of the 4 seasons <u>Vocabulary</u> Shades Seasons
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Home, workshop, or group home. (Students could color in outline pictures of the seasons.)	<u>Resource Guide</u> Fifty Simple Things You Can Do My Book About Saving Energy 280

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "Open & Shut" #1

Level B-3
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Identify weather-proofing and sealing devices on windows and doors.

Procedures - Show students pictures of outdoor scenes of summer, winter. (If they are line drawings, student may color them) -- For summer picture, have student open windows wide. -- For winter picture, have students close windows tight. -- For fall and spring pictures, open windows if warm outside; close them if cool outside. -- If practical, do this with actual windows.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Room with windows that open - or simulated window Pictures of four seasons Worksheet
	<u>Vocabulary</u> Closed Cool Open Ventilation Warm
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- At appropriate time of year, have students decide each day, at different times of the day, how window shades should be set. 281	<u>Resource Guide</u> Your Conservation Handbook My Book About Saving Energy 282

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "Open & Shut" #2

Level B-4
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Make sure doors are open or closed as seasonally appropriate.

<u>Procedures</u> -- Show students pictures of outdoor scenes of summer, winter. (If they are line drawings, student may color them.) -- When shown picture of winter, have student close door left open for this purpose. -- For summer picture, have door open in A.M. and P.M., closed at mid-day. -- Have students stand in front of open door in winter to feel cold air come in. -- Have students stand in front of open door at mid-day to feel the heat come in.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Pictures of outdoor scenes of summer, winter Room with access to door to outside Worksheet- crayons (optional)
	<u>Vocabulary</u> Ventilation Air flow
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- This concept can be practiced on a worksheet found in the first item listed in in the Resource Guide Section, pgs. 10 and 12. 233	<u>Resource Guide</u> PA Energy Office Coloring Book My Book About Saving Energy 234

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity Sealed Tight #1

Level C-1
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Identify weather proofing and sealing devices on windows and doors.

<u>Procedures</u> -- On a table, have samples/pictures of storm windows, storm door, plastic storm window kit, and various types of weather stripping. -- Have students go to table and take cards with names of item written on them. -- Student will place name card on matching item. -- Have student approach a refrigerator; open door slightly - let student put hand near crack to feel cold air coming out; point to seal on refrigerator door. Close and feel again. (No cold air). Explain that seal keeps cold air in, warm air out. -- On a door, identify the weatherstrip/storm door. -- On a window, identify storm window.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☒ Community Based ☒ Out of Doors <u>Materials/Preparation</u> Samples/pictures of weather strip, storm windows/doors Room with refrigerator Room with door/windows with storms and stripping Name cards for items <u>Vocabulary</u> Storm window Storm door Weather strip
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> 285	<u>Resource Guide</u> Your Conservation Handbook My Book About Saving Energy 286

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "Sealed Tight" #2

Level C-2
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Install weather-proofing and sealing devices on windows and doors.

Procedures -- If window is available, take self-adhesive weather strip, cut to size, attach to top/bottom edge of window. -- If window is not available, take "2x4" board to simulate window and attach strip. -- Do same for door, and or include sides of door. -- Take storm window to window and attach in appropriate manner with weather strip in place.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Weather strip Storm windows and pictures of windows without storm window Door without weatherstripping/ "2x4" board/ window without weather strip
	<u>Vocabulary</u> Storm window Storm door Weather strip Adhesive
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Students can do a home project (or in group home or community living arrangement) of putting in weather strips wherever it is needed around the house or apartment. 287	<u>Resource Guide</u> Your Conservation Handbook Household Ecoteam Workbook 288

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity: "Get With the Program"

Level: C-3
Domain: Domestic Maintenance
Goal Area: Home Maintenance

Objective: Identify programmable thermostats.

Procedures -- Shown pictures of various types of thermostats that control home heating/cooling (programmables, manual setting with round dial and vertical setting formats), students will verbally identify those thermostats that can be programmed to change at different times of the day. -- Shown a thermostat on the wall, students will state whether or not it is programmable.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Pictures of various types of thermostats Thermostats on wall in school, workshop, A.D. L. or other area
	Vocabulary Thermostat Settings Programmable Set-back thermostat Manual
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Tell students to look at home (group home or community living arrangement) and determine what type of thermostat they have, manual or programmable.	Resource Guide My Book About Saving Energy Household Ecoteam Workbook

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity: "Programmer"

Level: C-4
Domain: Domestic Maintenance
Goal Area: Home Maintenance

Objective: Use appropriately a programmable thermostat.

Procedures -- Using a photo from instruction manual or other picture or an actual programmable thermostat (if available), direct students to perform the following: 1. set maximum temperature 2. set morning time 3. set minimum temperature 4. set evening/night time 5. set "Program Set" button This procedure will vary depending on thermostat, but stress the principle of lower at night, higher during the day.	Instructional Environment ☐ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Picture of programmable thermostat or instruction manual from a programmable thermostat Optional, if available, actual programmable thermostat on the wall in a school, workshop, A.D.L., or other area Vocabulary <table> <tr> <td>Thermostat</td> <td>Minimum</td> </tr> <tr> <td>Programmable</td> <td>Set-back thermostat</td> </tr> <tr> <td>Settings</td> <td></td> </tr> <tr> <td>Maximum</td> <td></td> </tr> </table>	Thermostat	Minimum	Programmable	Set-back thermostat	Settings		Maximum	
Thermostat	Minimum								
Programmable	Set-back thermostat								
Settings									
Maximum									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- If students have a programmable thermostat at home, ask parents to allow their student to set it. Do the same for group home or community living residents. 291	Resource Guide Your Conservation Handbook Household Ecoteam Workbook 292								

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "Meter Monitor"

Level D-1
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective Monitor home energy use during heating/cooling seasons.

Procedures -- Using the "Home Energy Survey" sheet from <u>Earth Day 1990</u>, have students fill one out in the daily living room at each season of the year. -- Students should bring one home and fill it out the same day of the school activity. -- At the end of the school year, let students compare each season for school and home. -- If you make your own sheet, be sure to include the following areas: electric use, gas/oil use, water use.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation "Meter Monitor" sheet "Home Energy Survey" sheet Old energy company (gas, electric, oil) bills Vocabulary Electrical Kilowatt
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) --This activity can be done with sample energy bills from anywhere. (Remove the name and address for privacy.) 293	Resource Guide Earth Day 1990 Activity Book The Class Project (N.W.F.) "Meter Monitors" 294

C.E.E.D. Instructional Activity Plan

Content Areas: Water & Energy Efficiency 2c
C.E.E.D. Objective: Demonstrate seasonally appropriate energy practices.
Instructional Activity "In Hot Water"

Level D-2
Domain Domestic Maintenance
Goal Area Home Maintenance

Objective For all seasons, demonstrate proper hot-water heater settings and insulation.

Procedures -- On a hot-water heater / picture, find thermostat. -- Check temperature setting and set for "Warm" or 120° if it is not already set for that temperature. -- Take a trip to a hardware or plumbing & heating supply store and in the store, identify hot water heater insulation. -- If possible purchase and install the insulation on the school hot-water heater. -- Discuss the benefits.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Hot water heater picture Heater insulation
	<u>Vocabulary</u> Thermostat Insulation
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- It could be an interesting experience if a parent who needed a hot water jacket would permit the class to install it for him/her. -- Compare a utility bill before installation and after installation.	<u>Resource Guide</u> Your Conservation Handbook The Class Project (N.W.F.) 236

Transportation



Transportation: Introduction

The way we get from place to place has a strong and lasting effect on our environment. We have a love affair with the car. The car is the leading contributor to air pollution in our country. The burning of fossil fuel, gasoline, in a car's engine produces several gasses: the two major gases that contribute to air pollution are ozone and carbon monoxide (CO). Ozone in the upper atmosphere forms a protective layer that filters out harmful ultraviolet radiation. Ozone from gasoline engines is trapped near the Earth's surface and is the leading cause of smog. Smog is usually associated with large cities such as Los Angeles but in fact more than half of all Americans live in areas where ozone levels exceed levels safe for humans. Carbon monoxide (CO), the second major polluting gas from gasoline engines, is believed to create numerous health risks. Motor vehicles are responsible for up to 90% of carbon monoxide pollution. Today there are estimated to be over 190 million cars in the United States. An average of 150,000 new cars are produced everyday. Transportation consumes 63% of all oil used in the United States and 50% of all U.S. oil is imported.

The federal government, in an attempt to help clean the air, enacted the Clean Air Act. The purpose was to reduce air pollution. In 1990 the Clean Air Act was reviewed and re-enacted. The act states that all states whose air violates the National Ambient Air Quality Standard (NAAQS) must submit a state implementation plan and must adopt either Federal or California Air Resources Board (CARB) regulations. Currently all Northeast states, with the exception of Vermont, do not meet the standards for ozone and all have areas that do not meet the standards for carbon monoxide.

Federal attempts to reduce air pollution by regulating car exhaust have little total effect on air pollution because the number of cars and the miles driven are increasing. Over the past forty years the number of cars has quadrupled and the number of miles driven is grown by approximately 25 billion miles a year. The increase in cars and miles driven will make it even harder to enact regulations that will make an impact.

Today the leading thoughts for relieving the environmental problems posed by transportation are simple to consider but difficult to achieve. One is the use of mass transportation. The United States used to be a leader in mass transportation but has fallen behind in recent decades. The infrastructure of U.S. railroads has shrunk greatly as money has been spent to build a huge interstate highway system. Bus transportation is typically only available in major cities and has limited service to suburban areas. To reverse the trend that has eroded the mass transportation system will take the concerned effort of many people.

Another solution to the transportation problem is car-pooling and ride sharing. The purpose of this solution is to reduce the number of vehicles on the road and reduce congestion. Motor vehicles create pollution whether they are stuck in traffic or moving down the highway. Alternate fuel and electric cars is another possible solution. Vehicles that run on ethanol, methanol and compressed natural gas can reduce emissions by 20-50 percent. Electric vehicles of ZEV (zero emission vehicles)

can reduce emissions by 50-90 percent. Alternate fuel and electric vehicles are currently limited in number, but growing.

All of the solutions for transportation problems are being looked at and the chance is that a mixture of all the solutions will yield the best results. On the individual level the activities in this section will help and you and your students think about the issue of transportation and make choices that best fit your needs.

C.E.E.D. Instructional Activity Profile

Transportation 3a

- A-1 Identify modes of transportation vs. non-transportation (point to pictures).
- A-2 Match objects or pictures by making an "x" for ones that help people travel.
- A-3 Carry items one by one or carry them in a wagon and compare which is more efficient use of your "energy."
- A-4 Pick-out pictures of modes of transportation and match them to the appropriate location.

- B-1 Walk through city streets, smelling air; draw pictures with "noisy colors" and black to indicate pollution.
- B-2 Compare pictures of cities with many cars that have smoggy air with pictures of cities/towns with few cars that have cleaner air.
- B-3 Match pictures of objects with the appropriate "fuel" for that item (example, gas-car, food-people).

- C-1 Fuel-usage: match drawing of amount of fuel (gas) needed to move a certain number of objects/people.
- C-2 Show how energy is changed in a car.
- C-3 Survey transportation "through the ages: increase in pollution from carriages to cars."

- D-1 Survey family/neighbors/teachers on auto use.
- D-2 Identify specific means to save on fuel (car pool, public transportation, bicycle).

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "Do I Go?"

Level A-1
Domain General Community Functioning
Goal Area Travel

Objective Identify modes of transportation vs. non-transportation.

Procedures -- Students will be shown a group of 10 pictures depicting five (5) modes of transportation (bicycle, car, boat, airplane, train) and five (5) objects that are not modes of transportation (chair, refrigerator, bottle, lamp, clock). -- Teacher will state that transportation moves people around from place to place. -- Students will be asked to point to or draw a circle around pictures of modes of transportation or color the appropriate items.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Worksheets Pencils/crayons Pictures from magazines of bicycles, car, boat, airplane, train, chair, refrigerator, bottle, amp, clock Vocabulary Transportation
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Students can go outside to identify as many of the modes of transportation as they can find during a walk around the "block". 301	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) 302 The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a

C.E.E.D. Objective: Identify the benefits of using public transportation.

Instructional Activity "Going, Going, Gone"

Level A-2

Domain General Community Functioning

Goal Area Travel

Objective Match objects or pictures by marking an "x" for ones that help people travel.

<u>Procedures</u> -- Given a set of pictures placed on a table or the floor, students will proceed to put an "x" on pictures that help make travel easier.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Laminated picture cards Overhead markers Table or floor space
	<u>Vocabulary</u> Based on pictures presented: - example: shoes, wings, sneakers, door, rock, tail, etc.
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Students can try to find as many items shown in the picture as they can either in the classroom, around the school or in the neighborhood.	<u>Resource Guide</u> In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "Carry Me Along"

Level A-3
Domain General Community Functioning
Goal Area Travel

Objective Carry items one-by one or carry them in a wagon and compare which is more efficient use of your energy.

Procedures -- Students will be given a pile of 20 "bricks" and asked to move them one at a time, as if they were too heavy to carry more than one, to a spot in another room. Students will record how long it took them. (Teacher can do this.) -- Students will then be given a wagon or cart (etc.) and asked to put bricks in it and move them back to the original location, time to be recorded. -- Times will be compared to determine which is more efficient. (A parallel can be drawn to public transportation vs. single auto.)	Instructional Environment ☒ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Wagon (wheelbarrow) or cart 20 cardboard "bricks" (or real bricks if available) Stop watch (or wristwatch with second hand) Vocabulary Wagon Efficient or easy Energy
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) 305	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 306

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "Two-Lane Black-Top"

Level A-4
Domain General Community Functioning
Goal Area Travel

Objective Pick out pictures of modes of transportation and match them to the appropriate location (e.g., car-road, boat-lake).

<u>Procedures</u> -- Students will be shown pictures of five (5) modes of transportation (bicycle, car, boat, airplane, train) and five (5) pictures of places these modes would be used (road, train tracks, sky or airport, lake, and bike path). -- Students will either point to or draw a line between the mode of transportation and its location.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors														
	<u>Materials/Preparation</u> Picture of transportation Pictures of location (Or worksheet combining both)														
	<table><tr><td colspan="3"><u>Vocabulary</u></td></tr><tr><td>Transportation</td><td>Boat</td><td>Lake</td></tr><tr><td>Airplane</td><td>Bicycle</td><td></td></tr><tr><td>Train</td><td>Airport</td><td></td></tr><tr><td>Car</td><td>Track</td><td></td></tr></table>	<u>Vocabulary</u>			Transportation	Boat	Lake	Airplane	Bicycle		Train	Airport		Car	Track
<u>Vocabulary</u>															
Transportation	Boat	Lake													
Airplane	Bicycle														
Train	Airport														
Car	Track														
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Students can go into the community to see how many of the modes and places they can find during a community walk. 307	<u>Resource Guide</u> In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 308														

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "The Nose Knows"

Level B-1
Domain General Community Functioning
Goal Area Travel

Objective Walk through city streets smelling air; draw pictures with "noisy colors" and black to indicate pollution.

<u>Procedures</u> -- Go to a busy city street location, such as a downtown intersection or a public transportation bus terminal where there will be a lot of auto exhaust. -- Give students a few minutes to smell the air. Ask them how it smells to them. -- Give each student paper and crayons and ask to draw or color how they feel about how the air smells. -- Repeat process with a visit to a park with little exhaust. -- Compare the drawings/colorings.	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☒ Community Based ☒ Out of Doors <u>Materials/Preparation</u> 9 x 12 in. white construction paper Box of crayons <u>Vocabulary</u> Exhaust Pollution
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- You can do the "nose test" wherever you go to sample the level of pollution -- your sense of smell is often an accurate judge of pollutants in the air.	<u>Resource Guide</u> In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity: "...and Don't Breathe the Air"

Level: B-2
Domain: General Community Functioning
Goal Area: Travel

Objective Compare pictures of cities with many cars that have smoggy air with pictures of cities/towns with few cars that have cleaner air.

Procedures -- Students will be shown two sets of photos: one will have a city scene with many cars and smoggy air (example: NYC at rush hour). The other will be of a small town street with few cars and clean air. -- Students will be asked to note differences (many cars vs. few cars, smog vs. clean air) and to think what might cause the differences in the air. -- Connect car exhaust with air pollution: More cars producing exhaust cause a greater amount of pollution in the air.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Pictures of city, cars, and smog Pictures of small towns, few cars, and clean air Vocabulary Smog Pollution
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Can be related to the previous activity "The Nose Knows!" 311	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 312

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "I've Got Gas"

Level B-3
Domain General Community Functioning
Goal Area Travel

Objective Match pictures of objects with the appropriate "fuel" for that item, (e.g., gas-car, food-people).

Procedures -- Students will be given worksheets in which they must draw a line between fuel and modes of transportation that use that fuel (food, people, oil, gas, truck, etc.).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Worksheets with various pictures of different forms of transportation and methods of energy pencils, crayons
	Vocabulary Based on pictures presented : car, gasoline Transportation Energy
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational 313 -- Home -- Social -- Recreation -- All have energy and fuel uses for transportation. Have students name them for each location.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 314

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity: "How Much is Enough?"

Level: C-1
Domain: General Community Functioning
Goal Area: Travel

Objective: Fuel usage: Match drawing of amount of fuel (gas) needed to move a certain number of objects/people.

Procedures -- Given two piles of pictures: one representing the amount(s) of fuel, the other representing types of vehicles with different % (percentages) of cargoes or passengers, the students will estimate the proper amount of fuel to run each vehicle.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors							
	Materials/Preparation Pictures of various vehicles and amounts of fuels (magazines, books, etc.)							
	Vocabulary <table border="0"> <tr> <td>Vehicles</td> <td>Passengers</td> </tr> <tr> <td>Fuel</td> <td>Cargoes</td> </tr> <tr> <td>Percentage (%)</td> <td></td> </tr> <tr> <td>Estimate</td> <td></td> </tr> </table>	Vehicles	Passengers	Fuel	Cargoes	Percentage (%)		Estimate
Vehicles	Passengers							
Fuel	Cargoes							
Percentage (%)								
Estimate								
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Students can compare how much fuel their school bus uses compared to their family car. 315	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 316							

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "Transformation"

Level C-2
Domain General Community Functioning
Goal Area Travel

Objective Show how energy is changed in a car.

Procedures -- Given an "Energy in a Car" worksheet, the student will follow the teacher's instruction (chart) on how energy is changed in a car. As teacher explains each part of the car, student will use color code box(es) indicating type of energy. You will need to use more than one color in many instances. (Each color represents a different type of energy). -- If you make your own, be sure to include gas tank, engine, transmission, axles, wheels.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors											
	Materials/Preparation 4 Colored pencils Worksheets (teacher-made or use from PA Elementary Science Activities Book -- Level 1, pg. 11-5) Teacher's car chart : Gas tank, engine, transmission, axles, wheels											
	Vocabulary <table border="0"> <tr> <td>Chemical energy</td> <td>Fuel tank</td> <td>Wheels</td> </tr> <tr> <td>Mechanical energy</td> <td>Engine</td> <td>Exhaust system</td> </tr> <tr> <td>Electrical energy</td> <td>Electrical System</td> <td></td> </tr> <tr> <td>Heat energy</td> <td>Transmission</td> <td></td> </tr> </table>	Chemical energy	Fuel tank	Wheels	Mechanical energy	Engine	Exhaust system	Electrical energy	Electrical System		Heat energy	Transmission
Chemical energy	Fuel tank	Wheels										
Mechanical energy	Engine	Exhaust system										
Electrical energy	Electrical System											
Heat energy	Transmission											
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Find out what forms of energy are "transformed" or used to make power for applications at home or work.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter											

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "Transportation through the Ages"

Level C-3
Domain General Community Functioning
Goal Area Travel

Objective Survey transportation "through the ages".

<u>Procedures</u> -- Divide the class into groups and assign each group a particular type of transportation. Each group should identify when their mode of transportation began to be used, how it changed through time, and what kind(s) of energy it required. -- Make a time line and have students write their mode of transportation on it.	<u>Instructional Environment</u> ☒ Classroom Based ☒ School Community Based ☒ Community Based ☐ Out of Doors																
	<u>Materials/Preparation</u> Roll of paper Writing markers Encyclopedias																
	<u>Vocabulary</u> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Walking</td> <td style="width: 25%;">Airplanes</td> <td style="width: 25%;">Steel/sledge</td> <td style="width: 25%;">Subway/elevated</td> </tr> <tr> <td>Carts</td> <td>Bicycles</td> <td>Horses</td> <td>Buses</td> </tr> <tr> <td>Wheels</td> <td>Covered wagon</td> <td>Cars</td> <td></td> </tr> <tr> <td>Trucks</td> <td>Trains</td> <td>Boats/ships</td> <td></td> </tr> </table>	Walking	Airplanes	Steel/sledge	Subway/elevated	Carts	Bicycles	Horses	Buses	Wheels	Covered wagon	Cars		Trucks	Trains	Boats/ships	
Walking	Airplanes	Steel/sledge	Subway/elevated														
Carts	Bicycles	Horses	Buses														
Wheels	Covered wagon	Cars															
Trucks	Trains	Boats/ships															
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Students could visit the community library to do further research on their type of transportation and make a presentation to the class.	<u>Resource Guide</u> In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter																

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "Auto Audit"

Level D-1
Domain General Community Functioning
Goal Area Travel

Objective Survey families/neighbors/teachers on auto use.

Procedures -- Students will be given checklists (teacher-made) to be given to family, neighbors, and teachers to indicate auto usage. Students will bring checklists to class where comparisons will be made of auto usage. (Commute to and from work, shopping, visiting family or friends.) -- Identify trips that could be made using mass transportation instead of auto. Calculate number and percentage of auto miles decreased by using mass transit.	Instructional Environment ☒ Classroom Based ☒ School Community Based ☒ Community Based ☐ Out of Doors
	Materials/Preparation Teacher-made checklist (indicating auto usage)
	Vocabulary Checklist Comparison Usage
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Students could also perform "audits" on teachers or supervisors at work. 321	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 322

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3a
C.E.E.D. Objective: Identify the benefits of using public transportation.
Instructional Activity "Alternatives"

Level D-2
Domain General Community Functioning
Goal Area Travel

Objective Identify specific means to save on fuel (car pool, public transportation, bicycle).

Procedures -- Given various means of travel to work or leisure, students must figure out how to save on fuel in a proper manner. (Example: by car - car pool; less than a mile, bicycle, walk...) -- Given a chart with "physical", "economic", and "environmental" columns marked, the students will list benefits of fuel savings in each column. Example: "physical" - walking increases heart rate; "economic" - walking saves gas money; "environmental" - walking saves our non-renewable resources.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors							
	Materials/Preparation Worksheets Pencils							
	Vocabulary <table border="0"> <tr> <td>Physical</td> <td>Non-renewable</td> </tr> <tr> <td>Economic</td> <td>Renewable</td> </tr> <tr> <td>Environmental</td> <td></td> </tr> <tr> <td>Resources</td> <td></td> </tr> </table>	Physical	Non-renewable	Economic	Renewable	Environmental		Resources
Physical	Non-renewable							
Economic	Renewable							
Environmental								
Resources								
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Exact amounts of fuel saved by comparing two modes of transportation could be calculated.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter							

C.E.E.D. Instructional Activity Profile

Transportation 3b

- A-1 Locating public transportation signs by matching pictures of signs/cards.
- A-2 Using bus: locate stop, boarding-exiting, place tokens, sitting appropriately.
- A-3 Using the El: locate stop, boarding-exiting, place tokens, sitting appropriately.
- A-4 Using the train: locate stop, boarding-exiting, place tokens, sitting appropriately.

- B-1 Take a trip using a bus.
- B-2 Take a trip using El/subway.
- B-3 Take a trip using a train.

- C-1 Identify people that work on mass transit.
- C-2 Identify-use sources of information about public transportation.
- C-3 Use a schedule to plan a trip.
- C-4 Use a SEPTA map to plan a route.

- D-1 Problem solve if having difficulty on public transportation.

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b

C.E.E.D. Objective: Use public transportation for trips.

Instructional Activity Find That "Stop"

Level A-1

Domain General Community Functioning

Goal Area Travel

Objective Locating public transportation signs by matching pictures of signs/cards.

Procedures -- Write the words "bus", "train", "Broad Street Line", "subway-surface", "Market-Frankford" on separate index cards. -- On matching card as given below, also write the words and draw a colored line across the top of the card: "Broad Street Line - orange line"; "Market-Frankford - blue line"; "Subway-Surface - green line". -- Photocopy from a route schedule or draw the "SEPTA" symbol on another card. -- Go outside to a transportation stop and have students match the sign with the correct card. -- Repeat for as many different kinds of public transportation as you can find.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors						
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Can be adjusted for any local public transportation system by using the appropriate symbol and modes of transportation for that area (example, in Washington, DC = Metro). -- Could be done as a classroom activity, using pictures of bus, etc., and matching words.	Materials/Preparation Marker Index cards Vocabulary <table> <tr> <td>Bus</td> <td>Train</td> </tr> <tr> <td>Broad Street Line (orange line)</td> <td>Market-Frankford (blue line)</td> </tr> <tr> <td>Subway-surface (green line)</td> <td></td> </tr> </table> Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter	Bus	Train	Broad Street Line (orange line)	Market-Frankford (blue line)	Subway-surface (green line)	
Bus	Train						
Broad Street Line (orange line)	Market-Frankford (blue line)						
Subway-surface (green line)							

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity: "Get On Board the Bus"

Level: A-2
Domain: General Community Functioning
Goal Area: Travel

Objective Using bus: locate stop, boarding/exiting, place tokens, sitting appropriately.

Procedures -- Go to an actual bus stop and have students identify it. -- When bus comes by, identify where you board (front door), where you exit (rear door), look inside and see where you pay (fare box). -- Observe passengers and their behavior. Point out to students the appropriate behavior (sitting quietly or standing quietly without creating a disturbance). Leave seats near front door for handicapped riders or senior citizens. -- You can prepare students ahead of time with vocabulary words/definitions on index cards or as follow-up lessons.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Marker (optional) Index cards (optional) Vocabulary Fare Bus stop Fare box Boarding Token
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Can be done as a simulated activity and as role-playing in the classroom, with students acting the parts of passengers or drivers with a shoe-box for fare box and chairs for seats.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity "Get On Board the El"

Level A-3
Domain General Community Functioning
Goal Area Travel

Objective Using the El: locate stop, boarding/exiting, place tokens, sitting appropriately.

Procedures -- Go to an actual El stop and have students identify it. -- Go up (or down) the steps and enter the station. -- Go to fare booth, and identify it as where you pay. -- Observe platform for arriving train and explain that you can enter any door and exit any door. -- Observe passengers and describe appropriate behavior (sitting quietly or standing quietly). -- You can prepare students ahead of time with vocabulary words/definitions on index cards or as follow-up lessons.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Marker Index cards Vocabulary <table border="0"> <tr> <td>Elevated train or El</td> <td>Platform</td> </tr> <tr> <td>Fare</td> <td>Token</td> </tr> <tr> <td>Fare box</td> <td></td> </tr> <tr> <td>Fare booth</td> <td></td> </tr> </table>	Elevated train or El	Platform	Fare	Token	Fare box		Fare booth	
Elevated train or El	Platform								
Fare	Token								
Fare box									
Fare booth									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Can be done as a simulated activity in the classroom. 330	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 331								

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b

C.E.E.D. Objective: Use public transportation for trips.

Instructional Activity "Get On Board the Train"

Level A-4

Domain General Community Functioning

Goal Area Travel

Objective Using the train: locate stop, boarding/exiting, place tokens, sitting appropriately.

Procedures -- Go to an actual train stop and have students identify it. -- Go up (or down) the steps and enter the station. -- Go to fare booth, and identify it as where you pay a fare. -- Identify platform of arriving/departing trains. -- Observe platform for departing train and explain that you can enter any open door and exit any open door of the train. -- Observe passengers and describe appropriate behavior (sitting quietly or standing quietly). -- You can prepare students ahead of time with vocabulary words/definitions on index cards or afterward as follow-up lessons.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	Materials/Preparation Marker Index cards
	Vocabulary Platform Conductor Fare Boarding Train
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Can be done as a simulated activity in the classroom. 332	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 333

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity "Let's Go On the Bus"

Level B-1
Domain General Community Functioning
Goal Area Travel

Objective Take a trip using the bus.

Procedures Take an actual trip on the bus, highlighting the following: -- Have students locate and identify the appropriate bus stop. -- Students will enter the appropriate door. -- Place token in the fare box. -- Sit or stand appropriately, leaving seats near the door for handicapped riders or senior citizens. -- Students will pull cord (or push button) to signal when they want to get off. --Exit from rear door.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Tokens or cash for public transportation. Vocabulary Bus stop Token Fare Fare box Boarding
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Whenever possible or practical, schedule field trips to use public transportation rather than using a van or school bus. 334 -- Parents may be willing to practice using the bus with their children whenever they use it.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity "Let's Go On the El"

Level B-2
Domain General Community Functioning
Goal Area Travel

Objective Take a trip using the El/subway.

Procedures Take an actual trip on the bus, highlighting the following: -- Have students locate and identify the appropriate El or subway stop. -- Go up (or down) steps to fare booth. -- Place tokens (or cash) in the appropriate area. -- Enter the platform and wait, staying away from the edge (marked by a yellow line). -- Enter the train and sit/stand appropriately. -- Exit train and platform to street.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Tokens or cash for public transportation. Vocabulary <table border="0"> <tr> <td>Elevated Train (El)</td> <td>Subway</td> </tr> <tr> <td>Blue Line</td> <td>Fare</td> </tr> <tr> <td>Market-Frankford</td> <td>Token</td> </tr> <tr> <td>El Stop</td> <td></td> </tr> </table>	Elevated Train (El)	Subway	Blue Line	Fare	Market-Frankford	Token	El Stop	
Elevated Train (El)	Subway								
Blue Line	Fare								
Market-Frankford	Token								
El Stop									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Whenever possible or practical, schedule field trips to use public transportation rather than using a van or school bus. 336 -- Parents may be willing to practice using the El with their children whenever they use it.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter								

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity "Let's Go On the Train"

Level B-3
Domain General Community Functioning
Goal Area Travel

Objective Take a trip using the train.

Procedures Take an actual trip on the train, highlighting the following: -- Have students locate and identify the train station. -- Locate ticket window and purchase ticket. -- Locate appropriate platform and wait for train. -- Board and take seat or stand holding on to appropriate pole, etc. -- Exit at correct stop.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	Materials/Preparation Train fare
	Vocabulary Platform Conductor Fare Ticket Train station Ticket window
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Whenever possible or practical, schedule field trips to use public transportation rather than using a van or school bus. 338 -- Parents may be willing to practice using the train with their children whenever they use it.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 339

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity "Who Am I" Game

Level C-1
Domain General Community Functioning
Goal Area Travel

Objective Identify people that work on mass transit.

Procedures -- Using public transportation, give each student a set of cards with words from the vocabulary list. -- The first students to correctly identify a particular worker gives the card with that word on it to the teacher. -- The first students to have no cards is the "winner".	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Marker Index cards Vocabulary <table border="0"> <tr> <td>Driver</td><td>Supervisors (optional)</td></tr> <tr> <td>Conductor (optional)</td><td>Ticket person</td></tr> <tr> <td>Transit police</td><td>Maintenance worker</td></tr> <tr> <td>Trainman</td><td></td></tr> </table>	Driver	Supervisors (optional)	Conductor (optional)	Ticket person	Transit police	Maintenance worker	Trainman	
Driver	Supervisors (optional)								
Conductor (optional)	Ticket person								
Transit police	Maintenance worker								
Trainman									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- This can be done strictly as a classroom activity by writing descriptions of each worker's job on the board and having students match their card to the description. -- Vocationally, more complete descriptions of each worker could be developed for career exploration.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter								

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity "Is That the Chattanooga Choo-choo?"

Level C-2
Domain General Community Functioning
Goal Area Travel

Objective Identify-use sources of information about public transportation.

Procedures -- Student will look-up (with assistance as needed) the SEPTA information phone number from the local phone book. -- Student will be given a mock destination to reach from the school. -- Student must use the information phone number to obtain the following information: 1) what route(s) do they take to get from school to their destination, (2) what times do the train/bus/etc. arrive, (3) how much will it cost them (including transfers).	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Phone book Telephone Paper Pencil
	<u>Vocabulary</u> Route Schedule Information
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- At home, parents can ask their child to obtain the same information about getting from home to school. -- Vocationally, if the student works, he/she can get route information about traveling from work to other destinations.	<u>Resource Guide</u> In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b

Level C-3

C.E.E.D. Objective: Use public transportation for trips.

Domain General Community Functioning

Instructional Activity "Get Me to the Church on Time"

Goal Area Travel

Objective Use a schedule to plan a trip.

Procedures --Choose a destination from the route schedule and choose a departure point. -- Direct the students to suppose that they must be at that location at a certain time. -- Students should write the destination down. Then find the arrival time for the route that is the closest time earlier than they must be there and record the time. -- Place the ruler on the route line or column and locate the name of the departure point. -- Read off the time that they must leave and record departure point and time to leave.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Paper Pencil Ruler Route schedule (any route, but it may be more meaningful to use a route that is near school). Vocabulary Route Schedule Departure Arrival
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Students could do the same to plan a trip to school on time in the morning or to get to work at an actual or simulated job site. -- Take the actual trip.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b

C.E.E.D. Objective: Use public transportation for trips.

Instructional Activity: "Do You Know the Way to San Jose?"

Level: C-4

Domain: General Community Functioning

Goal Area: Travel

Objective: Use a SEPTA map to plan a route.

Procedures -- Students will point to one example of each of the following on the map: subway (orange line); El (blue line); trolley (green line); bus (red line); train (gray line). -- Student will be shown a departure point and a destination and student should record them. -- Using the color-coded lines on the map, students should record what types of transportation will get them from point to point and the route numbers of the buses or trolleys.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation SEPTA transit map (city or suburban) Paper Pencil Vocabulary Transit map Departure point Route Arrival point Transfer point
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Students can be asked to find more than one way to get from point to point and decide which is easiest, fastest, and cheapest.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3b
C.E.E.D. Objective: Use public transportation for trips.
Instructional Activity "Can I Help You?"

Level D-1
Domain General Community Functioning
Goal Area Travel

Objective Problem solve if having difficulty on public transportation.

Procedures -- Students will identify individuals who may be of assistance should a problem arise and match the appropriate person with the corresponding problem by pointing to or reading the name of the correct person on the board. Combinations may be: If lost: * Conductor * Transit police * Ticket person If you see a crime: * Transit police * Pull alarm * Conductor * Ticket person If someone bothers you or commits a crime against you: * Transit police * Pull alarm * Conductor * Ticket person	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors Materials/Preparation Chalkboard Chalk Vocabulary Conductor Transit police Ticket Alarm
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Practice identifying these individuals while on an actual trip on public transportation in the community. 348	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 349

C.E.E.D. Instructional Activity Profile

Transportation 3c

- B-1 Identify gas cap and exhaust pipe (energy in-put and pollution out-put); relate gas used to pollution produced.
- B-2 Identify what items on a car require regular maintenance.
- B-3 Identify a maintenance schedule for a car in an owner's manual.
- B-4 Identify specific parts of a maintenance schedule that might affect pollution out-put: oil changes, tire maintenance, catalytic converters, etc. using proper octane gas.
- C-1 Explore recycling of oil from changes, old tires.
- C-2 Identify energy efficient vehicles (example trucks vs. compact cars).
- C-3 Identify environmental impact of energy efficient vehicles.
- D-1 Identify monetary savings of driving fuel-efficient vehicles.
- D-2 Identify driving practices that promote fuel efficiency.

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity "Parts Place"

Level B-1
Domain General Community Functioning
Goal Area Travel

Objective Identify gas cap and exhaust pipe (energy input and pollution output) and relate gas used to pollution produced.

Procedures -- Given a picture of a car, students will choose from cut up pieces of car parts and place appropriate parts on correct location on a car. Instruction can be taken outside and used on a real car with students matching the pictures to the actual parts of the car on the gas cap and on the exhaust pipe. -- Use a picture of smoke, smog, or exhaust to match with the exhaust pipe, and a picture of gas pump to go with gas cap.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Picture of car Picture of car parts (gas cap, exhaust pipe) Velcro Picture of smoke, smog, or car emitting visible exhaust Picture of gas pump Vocabulary <table border="0"> <tr> <td>Exhaust pipe</td><td>Input</td></tr> <tr> <td>Gas cap</td><td>Output</td></tr> <tr> <td>Car</td><td>Energy</td></tr> <tr> <td>Pollution</td><td></td></tr> </table>	Exhaust pipe	Input	Gas cap	Output	Car	Energy	Pollution	
Exhaust pipe	Input								
Gas cap	Output								
Car	Energy								
Pollution									
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Use pictures/samples of varying amounts of gas and smoke/exhaust and have students match: little gas, little exhaust vs. a lot of gas, a lot of smoke/exhaust. 351	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 352								

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity: "Grease and Oil"

Level: B-2
Domain: General Community Functioning
Goal Area: Travel

Objective: Identify what items on a car require regular maintenance.

Procedures --Given a picture of a color-coded car students will identify parts that require regular maintenance with special emphasis on tires, gas, oil, and lights.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
	Materials/Preparation Poster of cars Real car parts Teacher-made colored picture of car showing maintenance items (tires, gas, oil, lights)
	Vocabulary All parts of a car the teacher wishes to emphasize: tires, engine(for gas & oil), lights (head and tail lights).
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Combine a vocational trip to an auto repair garage and learn about jobs while you observe maintenance being performed on a car. 353	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 354

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity: "Manual Labor"

Level: B-3
Domain: General Community Functioning
Goal Area: Travel

Objective: Identify a maintenance schedule for a car in an owner's manual.

Procedures -- Show students a sample of a maintenance schedule from one manual, then ask students to identify the similar schedule for the other available manuals.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Selection of auto manuals (Can be obtained from fellow teachers who drive various brands of cars)
	Vocabulary Different parts of the car to be emphasized: electrical system, transmission, drive train, cooling, etc.
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Direct students to develop their own maintenance schedule for another motorized piece or equipment they may have at home or workshop (lawn mower, vacuum cleaner, etc.) 355	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 356

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity "Exhausted"

Level B-4
Domain General Community Functioning
Goal Area Travel

Objective Identify specific parts of a maintenance schedule that might affect pollution output: tire maintenance.

Procedures -- Given two bicycle wheels with tires, one inflated properly and one under-inflated, students will demonstrate how properly inflated tires travel longer distances than under-inflated tires using the same energy. -- Roll the inflated tire straight down the incline and have one student stand at the point at which it stops. -- Next, do the same with the under-inflated tire and compare the distances traveled.	Instructional Environment ☒ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Bicycle wheels with tires Incline for starting tires rolling Vocabulary Inflated Under-inflated Energy Maintenance
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- If a wheelbarrow with inflatable wheels is available at work, let students push it with a small load in it first when it is inflated, then under-inflated. Ask which is harder to push (requires more energy). 357	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 358

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity "Tires into Sandals"

Level C-1
Domain General Community Functioning
Goal Area Travel

Objective Explore recycling of oil from changes, old tires.

Procedures -- Students will visit local service station(s) to see what happens when you turn in tires, oil, etc. for recycling.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☒ Community Based ☐ Out of Doors
	Materials/Preparation Contact for visitation a service station or recycling center that accepts used oil and tires for recycling Arrange for transportation
	Vocabulary Recycling Reusable Non-reusable
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Vocational: Explore careers available at the service station(s) while visiting; get suggestion for items at work that could be brought to the service station. 359	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 360

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c

C.E.E.D. Objective: Identify benefits of driving a well-maintained car.

Instructional Activity "I Need a Bigger Tank"

Level C-2

Domain General Community Functioning

Goal Area Travel

Objective Identify energy efficient vehicles (e.g., trucks vs. compact car).

Procedures --Given comparisons between people and amounts of energy, students will be able to select most efficient form of travel per person. -- Shown a picture of a pick-up truck and a compact car, give students an estimate of mileage for each (e.g., 30MPG for car, 15 MPG for truck). Give example of a 30-mile trip and have students determine which uses less gas. Ask which would be the most efficient way for a person to drive to work.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Picture of a compact car Picture of a pick-up truck Vocabulary Comparison Energy Modes of transportation (walk, bus, bicycle, car, truck)
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Have students suggest what other forms of transportation might be energy efficient, and which could be used to go to work. 361	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 362

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity "Dirty, Dirtier, Dirtiest"

Level C-3
Domain General Community Functioning
Goal Area Travel

Objective Identify environmental impact of energy efficient vehicles.

Procedures -- Using bar graph, student will be able to see environmental savings between efficient and less efficient vehicles with the same number of people in each vehicle. -- Use same materials in activity C-2 (previous page) for the vehicles (pick-up truck and compact car). Use 3 people as the example, with same mileage figures.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	<u>Materials/Preparation</u> Bar graph charts (teacher-made) Copied handouts of above charts
	<u>Vocabulary</u> Efficient Less efficient Bar graph
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Create more extensive graphs using a larger variety of vehicles for comparison (car, truck, bus, airplane). 363	<u>Resource Guide</u> In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 364

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity "You Can Bank on It"

Level D-1
Domain General Community Functioning
Goal Area Travel

Objective Identify monetary savings of driving energy efficient vehicles.

Procedures -- From a "Car Buying Guide", newspaper ads, etc., obtain mileage figures for one luxury car and one compact car. -- Assign one student to be the "owner" of each car. -- Use the figure of a 100 mile round trip to determine how much gas each car would use on a trip. -- Give each "owner" play money to pay for their gas, each student starting with the same amount of money. -- Using \$1.25 as average price/gallon of gas, determine how much each "owner" must pay. -- See who has the most money left over to "save".	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Play money Pencil & paper Newspaper car advertisement Car Buying Guide Vocabulary Mileage Fuel-efficient Round-trip
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Home - students can calculate the cost of a family trip and compare it to the cost per mile of the vehicles used for comparison. -- Work - calculate per person costs of a van-pool trip and a single-occupant trip of the same distance.	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity "Push Start"

Level D-2
Domain General Community Functioning
Goal Area Travel

Objective Identify driving practices that promote fuel efficiency.

Procedures -- Load up the hand truck or cart with several heavy boxes. -- Give each students a turn to perform two tasks which are first demonstrated by the teacher: (1) student tries to start running a short distance from a dead stop while pushing the truck/cart, and (2) student moves from a stop to a slow walk while pushing truck/cart. -- Ask each student which was more difficult (required more energy). Most should answer the first one, a "jack rabbit" start. A car uses more energy to do the same. -- Have a student ride a bicycle a short distance with full and then flat tires. Ask which was more difficult. Discuss proper tire inflation.	Instructional Environment ☐ Classroom Based ☒ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Hand truck or cart Bicycle Heavy boxes Vocabulary "Jack rabbit" start Drag Inflation
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Home - have students check for proper tire inflation on parent's car; discuss driving habits with family members. 367	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 368

C.E.E.D. Instructional Activity Plan

Content Areas: Transportation 3c
C.E.E.D. Objective: Identify benefits of driving a well-maintained car.
Instructional Activity "Let's Get Together"

Level D-3
Domain General Community Functioning
Goal Area Travel

Objective Explore how to set up car pools, van pools, etc.

Procedures -- Help (if needed) students look up phone numbers for the State Department of Transportation. -- Call and ask about how to get information on setting up car or van pools. -- Survey teachers who share rides/car pool to school. -- Call a large corporation and ask if they provide van/car pools and how they set it up.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Telephone book Telephone Pencil Paper
	Vocabulary "Pool" Commute
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Take a field trip to talk to transportation coordinator for a large company contacted in the above activity. 369	Resource Guide In the Philadelphia area, the Southeastern Pennsylvania Transportation Authority has information on schedules, fares, and services. (Consult your local public transportation system for information in other parts of the state/country.) The Green Commuter 370

Citizenship



Citizenship: Introduction

Citizenship is usually defined in terms of rights and privileges given to an individual as part of being a community member. What is too often lost in discussions about citizenship is the sense of the responsibilities that also comes with it. Students with developmental disabilities are often considered to be on the fringe of their communities, usually as the recipients of services. Rarely are they considered to be active participants who can demonstrate the responsibilities of citizenship. Throughout the objectives of the curriculum, actions that are indicative of demonstrating responsibilities are present: they develop personal accountability, making decisions and demonstrating environmentally sound behaviors. Citizenship is an integral part of any environmentally responsible set of actions. In helping to maintain the environment, one is also helping to maintain the necessary base for a healthy and thriving society.

This section of the curriculum is organized in a different manner than the other sections. Rather than attempt to develop a separate set of activities, the Citizenship Objectives have been correlated with the activities for Recycling, Water and Energy Efficiency, Transportation and Outdoor Appreciation in the form of a table.

The table indicates the Citizenship Objectives on the left. All other areas are listed across the top. Under each area across the top, lower case letters that correspond to that areas' objectives are given.

This provides a convenient means for showing which activities relate to each Citizenship Objective. For example, if the teacher were interested in finding a Transportation Activity that related to Citizenship Objective "a":

- go to the Transportation heading across the top of the page;
- choose, for example, Objective "a"
- read down the column to find the number and to the left to find the level.

In this instance, it would be Transportation Objective "a," Level D, #2. Simply repeat this procedure to find activities for any objective desired.

CITIZENSHIP OBJECTIVES	OBJECTIVES	RECYCLING						WATER & ENERGY EFFICIENCY			TRANSPORTATION			OUTDOOR APPRECIATION	
		a	b	c	d	e	f	a	b	c	a	b	c	a	b
a. Demonstrate personal accountability by making environmentally responsible actions.	Activity Level A	1 - 5	1 - 5			2	1 - 4								1
	B	1 - 3	1 - 4	2 - 5	1 - 4	1 - 4	1 - 4		3	1 - 4		1 - 3	4		1
	C	1 - 4	1 - 5	1 - 4	1 - 4		1 - 4	4	1, 2, 4	2, 4			1	4	
	D	1 - 3			4	2, 3		1 - 4	1, 2, 3	1, 2	2	1	3		1
b. Demonstrate leadership by encouraging environmentally responsible group actions.	A														
	B											1 - 3			
	C							4						4	
	D		1, 2	1, 2	4	2, 3			2		2	1	3	3	1
c. Demonstrate environmentally responsible skills in structured and unstructured situations.	A	1 - 4	1 - 5			2	1 - 4								1
	B	1 - 3	1 - 4	2 - 5		1 - 4	1 - 4		3	1 - 4		1 - 3			1
	C	1 - 4	1 - 5	1 - 4			1 - 4	4	1, 2, 4	4				4	1
	D	1 - 3				2, 3		1 - 4	1, 2, 3	4, 2	2	1	3	3	1
d. Demonstrate critical thinking by distinguishing between environmental facts and environmentally responsible choices.	A										3			4	
	B										2		1, 4	2, 4	
	C							4	3				3	1 - 3	1
	D		1, 2	2	2, 4	2, 3	1, 2		2	1		1	3	1, 3	1
e. Demonstrate informed decision making by communicating the reasons for making environmentally responsible choices.	A														
	B							1 - 4					1, 4		
	C										3		3		1
	D		1, 2	1, 2	2, 4	2, 3	2		2, 3	1	1, 2	1	3	3	1
f. Participate in activities that foster environmental awareness.	A													1 - 4	1
	B				1 - 4					1 - 4		1 - 3	1, 4	1 - 4	1
	C						1 - 4	4	1, 2, 4	2, 3, 4				1 - 3	1
	D		1, 2	1, 2	4		1, 2	4	1, 2, 3	1, 2	1, 2	1	2, 3	1 - 3	1

Outdoor Appreciation



Outdoor Appreciation: Introduction

Today people spend less time outdoors than ever before. Watching television, playing video games and going to shopping malls has become the norm for leisure time activities. As environmental problems become more complicated and change at an accelerated pace, the need to appreciate the natural environment becomes more important. Decisions on land use and open space are being made everyday and if people do not have a sincere awareness and knowledge of the natural world it will be difficult to make appropriate decisions.

The activities in this section are designed, as the section title states, to help you and your students gain an appreciation of the outdoors. The best way to involve students in the outdoors is to start with your immediate surroundings. Begin with the simple activity of getting outdoors on a regular basis. To many, going outdoors is seen as time away from learning. If students go outdoors often they will begin to consider it part of the learning day and lessons from all disciplines can be taught. The outdoor environment does not have to be a park with forests and fields; it can be the school yard, a vacant lot, parking lot or side walk. Nature is not some removed place but is all around us. To stress this and make it real for your students will provide them with the first true step in appreciating the outdoors. Get to know the immediate surrounding of your school. The experiences of simple observation will greatly increase your students' appreciation of the natural world. The experiences they gain from observing their local environment will be of great value when they explore other areas.

Many teachers feel uncomfortable about teaching in the outdoors because they feel that they do not have enough background knowledge to identify the plants and animals that they may encounter. Do not let this discourage you from going outdoors. Nature is not a list of names but rather a living system of actions and reactions. When outdoors, look for patterns, similarities and differences among the things you observe. The knowledge gained by observation, questioning and forming conclusions will take you and your students much closer to an appreciation of the outdoors than naming objects will. With time, you and your students will develop ways to determine if your conclusions are correct.

The process of observation and discovery will create an atmosphere that can lead to action. Once students are comfortable and knowledgeable about their surrounding they will begin to look for ways to improve or correct the things they have observed. The action that is taken will not only provide a learning experience and new knowledge, but will develop a feeling of stewardship and ownership in the environment. Outdoor appreciation is a learning process and if that process ends with action, then it has been complete. There is a Chinese proverb that states "To know and not to do is not yet to know."

If you want to improve your knowledge and sharpen your outdoor teaching skills, there are several free interdisciplinary curricula available from different state agencies. Each of these curricula come with dozens of educational activities about the natural world. To obtain the materials teachers, scout leaders, or community group leaders must participate in an education workshop. Many school districts and

intermediate units also offer in-service sessions on the subject. Contact the agencies below to find out when a workshop will be held in your area.

Keystone Aquatic Resource Education (K.A.R.E.)

This program looks at water resources, water use and the aquatic environment.

Materials are appropriate for grades K through 12.

Contact: The Pennsylvania Fish and Boat Commission

P.O. Box 67000

Harrisburg, PA 17106-7000

Carl Richardson, Coordinator

(717) 657-4010

Project Wild

This program looks at wildlife, habitat and human impact on wildlife. Materials are appropriate for grades K through 12.

Contact: The Pennsylvania Game Commission

2001 Elmerton Avenue

Harrisburg, PA 17110-9797

Theresa Alberici, Coordinator

(717) 783-4872

Project Learning Tree

This program focuses on forests and forest resources

Contact: The Office of Environmental Education, Bureau of Curriculum

Pennsylvania Department of Education

333 Market Street, 8th Floor, P.O. Box 911

Harrisburg, PA 17126-0333

Patricia Vathis, Coordinator

(717) 783-6994

There are many Nature Centers, Environmental Education Centers and State Parks and Forests that offer excellent opportunities to explore a variety of natural settings. The Commonwealth of Pennsylvania has two bureaus that manage the majority of the states public lands. To receive information about public lands and resources available at those sites, contact either of the bureaus listed below.

Pennsylvania Bureau of Forestry, DER

District 17 (Bucks, Berks, Montgomery, Philadelphia, Delaware, Chester and Lancaster Counties) Ridge Road, RD #4, Pottstown, PA 19464 (610) 469-6217

The Bureau manages over two million acres of State forest lands. They also arrange appearances for Smokey the Bear and Woodsy Owl.

Pennsylvania Bureau of State Parks, DER

P.O. Box 8551

Harrisburg, PA 17105-8551

1-800-63-PARKS

The Bureau manages 114 parks

C.E.E.D. Instructional Activity Profile

Outdoor Appreciation 5a

- A-1 Students will increase their awareness of the general environment, while hiking/walking on a guided tour.
- A-2 Students will increase their awareness of plants (through the planting of seeds).
- A-3 Students will increase their awareness of animals
- A-4 Students will increase their appreciation of the beauty of the environment.

- B-1 Students will increase awareness of specific environments through designated outdoor activities.
- B-2 Students will increase awareness of the part plants play in our daily diet.
- B-3 Students will increase awareness of feeding habits of various animals.
- B-4 Students will increase awareness of things that are and are not native to the environment (scavenger hunt, sorting, collecting).

- C-1 Increase awareness of the Ecosystem through designated outdoor activity.
- C-2 Students will observe and understand the cycle of plant life through designated gardening experience.
- C-3 Students will observe and understand the life cycles and habitats of animals.
- C-4 Students will increase awareness of their personal response in caring for the earth.

- D-1 Explore the concept of open space through designated outdoor activity.
- D-2 Explore and understand the concept of photosynthesis and how humans depend on this process.
- D-3 Identify and explore and factors affecting threatened and endangered species.

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Follow that Seed"

Level A-1
Domain Recreation and Leisure
Goal Area Hobbies

Objective Increase awareness of the general environment while hiking/walking.

Procedures -- Ask students what seeds are and what they do. Ask for examples. -- Collect seeds in one or more of the following ways: - Pick up seeds from the ground and put in container. - Drag an old blanket or cloth through the area. - Put wool socks over shoes and walk through the area. - Wear bracelets of masking tape with sticky side out in order to have small seeds stick to their bracelet. -- Examine and sort seeds. -- Lead a discussion about the structure and functions of seeds. -- Plant seeds collected.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
	Materials/Preparation Blankets, wool socks, pieces of cloth, pieces of cardboard, masking tape, container, soil, water.
	Vocabulary Seeds Collect Sort
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Let students collect seeds from home and see what different ones they can find. 370	Resource Guide Project Learning Tree 365 Outdoor Activities 380

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Sprouts"

Level A-2
Domain Domestic Maintenance
Goal Area Gardening

Objective Increase awareness of plants through the planting of seeds.

Procedures -- In the spring, find a sprouting plant, flower, or dandelion. -- Put a stick into the ground next to it. -- Each day, mark the growth on the stick as the plant gets taller. -- Record the amount of growth. -- Talk about what it needs to grow.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
	Materials/Preparation Locate an area with dandelions. Dig up a dandelion and bring it to class.
	Vocabulary Plant Dandelion Growth
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Plant a tree. -- Plant cutting from another house plant. -- Make a chart or graph of the growth to visually represent its progress.	Resource Guide Project Learning Tree 365 Outdoor Activities 382

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a

C.E.E.D. Objective: Demonstrate appreciation for natural environments.

Instructional Activity "Grow a Butterfly"

Level A-3

Domain Recreation & Leisure

Goal Area Hobbies

Objective Increase awareness of animals.

Procedures -- Make a trip to an open field where milkweed grows-- sole food of the monarch butterfly. -- Collect milkweed plants with monarch caterpillars on them, gather several extra plants. -- Put stems of plants in a container of water to keep them alive. -- The caterpillars will munch on leaves. -- Add new food as needed. -- Observe caterpillars making chrysalis. -- Observe butterfly emerging from chrysalis. -- Release butterfly.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Look for other caterpillars. Observe and identify. 383	Materials/Preparation Milkweed Caterpillars Container of water Vocabulary Butterfly Caterpillar Chrysalis Resource Guide Project Learning Tree 365 Outdoor Activities 384

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Shadow Games-Shadow Tag"

Level A-4
Domain Recreation & Leisure
Goal Area Game Activities

Objective Increase appreciation of the beauty of the environment.

Procedures -- Play a game of tag, but instead of touching the other person, whoever is designated "it" tries to touch the others' shadows with his or her own.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
	Materials/Preparation Sun Students
	Vocabulary Shadow Tag
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) Other games using shadows: -- Shadow Hiding - Line up shadows behind each other so only one shadow is showing. -- Shadow Charades - Identify what animal or activity you are portraying with your shadow.	Resource Guide Sharing Nature with Children 365 Outdoor Activities 386

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a

C.E.E.D. Objective: Demonstrate appreciation for natural environments.

Instructional Activity "Schoolyard Safari"

Level B-1

Domain Interpersonal Communication

Goal Area Responding to the Environment

Objective Increase awareness of specific environments through designated outdoor activities.

<u>Procedures</u> -- Take students on a "safari" of the school grounds or a nearby park. <u>Look</u> for signs of animal life. <u>Listen</u> for signs of animal life. -- In classroom, ask questions & discuss findings. - What animals did you observe? - What do animals need to live? - What kinds of food do animals find on school grounds/ in parks?	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
This row is merged into the Procedures section above	<u>Materials/Preparation</u> Optional: Clipboards, pencils, paper, drawing paper, colored pencils, magnifying glasses
This row is merged into the Procedures section above	<u>Vocabulary</u> Habitat
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> --Provide bird feeders, baths, shelters or food to attract other kinds of animal life. --Research the different animals found on the safari.	<u>Resource Guide</u> Project Learning Tree Loving Your Environment 388

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Spaghetti Garden"

Level B-2
Domain Domestic Maintenance
Goal Area Gardening; Meal Preparation

Objective Increase awareness of the part plants play in our daily diets.

<u>Procedures</u> -- Students will grow all the ingredients for spaghetti sauce and/or go to the grocery store to purchase items. -- Make spaghetti sauce: a. Immerse a dozen tomatoes in boiling water then in cold. b. Cook the following in 1/4 cup oil over medium heat: 1 chopped green pepper 2 chopped onions 3 chopped carrots 5 minced cloves of garlic c. Add the tomatoes, 1/8 cup chopped basil and oregano, salt and pepper. d. Bring to a boil and simmer 1 to 2 hours. e. Serve over pasta.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
This section is merged into the Procedures column in the original image	<u>Materials/Preparation</u> Seeds for: tomatoes, carrots, green peppers, oregano, basil, onion, garlic Garden area Pasta
This section is merged into the Procedures column in the original image	<u>Vocabulary</u> Gardening Vegetables Spaghetti sauce Pasta Herbs
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> --Plants in the Pizza? - List foods that come from plants. Identify the plant parts from which each food comes (i.e. roots, stems, leaves, stalks, flowers, fruits, and seeds). 389 --Analyze your lunch.	<u>Resource Guide</u> Project Learning Tree 365 Outdoor Activities 330

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "This Lunch is for the Birds"

Level B-3
Domain Recreation & Leisure
Goal Area Hobbies

Objective Increase awareness of feeding habits of various animals.

<u>Procedures</u> -- Build or buy a bird feeder. -- Attach bird feeder to outside ledge of the window or visible tree branch. Put a water dish out as well. -- Caution students not to make sudden movements. -- Teacher should identify the birds for the children using pictures. -- Observe: a) kinds of foods different birds eat b) number of birds that come to the feeder c) observe how long different birds stay at the feeder d) observe the ground-feeding birds	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
This row continues the 'Procedures' section from the previous row	<u>Materials/Preparation</u> Bird feeder, water dish, grains, dry cereal, all types of seeds, crackers
This row continues the 'Procedures' section from the previous row	<u>Vocabulary</u> Feeding station Bird feeder Identify Appropriate bird names
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Feeders can be made and monitored for other small animals, such as squirrels, chipmunks, groundhogs. 391	<u>Resource Guide</u> Hug A Tree Project Learning Tree 392

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Un-Natural Scavenger Hunt"

Level B-4
Domain Recreation & Leisure; Functional Academics
Goal Area Hobbies ; Writing

Objective Increase awareness of things that are not native to the environment.

Procedures -- Along a wooded section of trail or a part of the school grounds with trees, or shrubs, place 10-15 man-made objects. Some should be brightly colored to stand out, others less so.) -- The students walk through the area one at a time, listing the objects they have found on their clipboards. -- At the end of the trail, students show teacher their list. -- If no one sees all the objects, tell everyone how many were spotted and let them go through again.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
	Materials/Preparation Area of schoolyard or trail in a part of woods will be prepared with a variety of objects - some found in nature and some man-made objects Clipboards and scavenger hunt list
	Vocabulary Identification Observation Camouflage
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- The concept of "blending in" can be used to work with the idea of animals and camouflage. Let students try to find "camouflaged" bugs and animals. 393	Resource Guide Sharing Nature with Children Project Learning Tree 394

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Is There a Lot in that Lot?"

Level C-1
Domain Functional Academics
Goal Area Writing

Objective Increase awareness of the ecosystem through designated outdoor activity.

Procedures -- Take a group of students to an open area. -- Have students observe and generate a list of living and non-living things. -- Generate a list of how one thing effects the other (i.e., ants carry plants, birds eat insects, plant can't grow on rock). -- Observe what effect, if any, people have had on the location. -- Check for any signs of pollution on the site. -- Back in class, have the students write and/or draw about their observations.	Instructional Environment ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors Materials/Preparation Locate an outdoor area for students to conduct observations (i.e., school yard, local park, vacant lot) Vocabulary <table> <tr> <td>Living</td> <td>Animal</td> </tr> <tr> <td>Non-living</td> <td>Predator</td> </tr> <tr> <td>Plant</td> <td>Prey</td> </tr> </table>	Living	Animal	Non-living	Predator	Plant	Prey
Living	Animal						
Non-living	Predator						
Plant	Prey						
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Brainstorm about what the whole "block" used to look like before there were any buildings there at all. 395 Write about what will happen to the plants/animals if a new building is put on a vacant lot.	Resource Guide Project Learning Tree Loving Your Environment 396						

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Terrarium"

Level C-2
Domain Domestic Maintenance
Goal Area Gardening

Objective Observe and understand the cycle of plant life through designated gardening experiences.

<u>Procedures</u> <u>Terrarium Activity</u> -- Put pebbles in large clear plastic container. -- Cover with a 2-inch layer of topsoil. -- Add branches, moss, and small plants to soil. -- Water the terrarium. -- Cover opening with a sheet of plastic. -- Record weekly any observed changes of the plants inside.	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
This row is merged into the first column's content area	<u>Materials/Preparation</u> Clear plastic container, gravel, small plants, rocks, branches, moss, plastic wrap, screen or stocking
This row is merged into the first column's content area	<u>Vocabulary</u> Terrarium Drainpipe Moist
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Small creatures (worms, bugs) can be added to the terrarium and observed. If more complexity is desired, build a larger one and add a larger variety of plants and creatures to the system. Observe and record. 397	<u>Resource Guide</u> 365 Outdoor Activities The Wonder of the Wetlands 398

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Animals - Big & Small"

Level C-3
Domain Functional Academics
Goal Area Writing

Objective Observe and understand the life cycles and habitats of animals.

Procedures -- Using picture cards, student will match pairs of juvenile & adult animals. -- Discuss the various habitats of each of the animal pairs. -- Write names of each animal as pairs are matched.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors
	Materials/Preparation Prepare picture cards of various animals (juvenile <u>and</u> adult) from old magazines (National Geographic is great) Pencil and paper
	Vocabulary Grow Young Change Adult
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Further research on a particular animal can be done. -- Make a report to the class. 399	Resource Guide Aquatic Project Wild 365 Outdoor Activities 400

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Letter Writing"

Level C-4
Domain Functional Academics
Goal Area Writing

Objective Increase awareness of their personal responsibility in caring for the earth.

Procedures -- Action Plans to maintain our "Wonderful World" might involve letters to legislators, clean-up campaigns, and "Save Our Bay" clubs. -- Ask children to collect samples of our "Wonderful World" and make collages, decorative post cards, mobiles, and wrist bracelets (use wide masking tape, sticky side out). -- Identify, sort and graph samples of our "Wonderful World" according to properties identified by the children.	<u>Instructional Environment</u> ☒ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
	<u>Materials/Preparation</u> Cardboard Masking tape String Pencils Paper Natural resources
	<u>Vocabulary</u> Campaigns Clubs Nature
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- In addition to writing letters, students can write to request further information from one or more groups in which they are interested. 401	<u>Resource Guide</u> Better Earth Fifty Ways to Help Your Community 402

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Projects in the Parks"

Level D-1
Domain Recreation & Leisure
Goal Area Hobbies

Objective Explore the concept of open space through designated outdoor activities.

Procedures

-- Discuss various places people go to participate in recreational pursuits or to enjoy the beauty of nature.

-- Each student will pick his/her favorite spot for recreation, write a description of the spot and draw a picture or map.

-- Visit as many of the spots as possible throughout the year.

-- Students will plan a project to enhance or improve a park area (picking up trash, planting trees, clearing a trail, etc.) as they go to visit each place.

Instructional Environment

☒ Classroom Based ☐ School Community Based
☐ Community Based ☒ Out of Doors

Materials/Preparation

Paper, pencils, crayons, & other art materials

Vocabulary

Recreation
Habitat
Management

Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)

-- Invite a resource person from a nearby park or recreation area to speak to the class.

Resource Guide

The Wonder of the Wetlands
Project Learning Tree

403

404

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Life-Giving Green"

Level D-2
Domain Functional Academics
Goal Area Measurement

Objective Explore and understand the concept of photosynthesis and how humans depend on this process.

<u>Procedures</u> -- Have students brainstorm a list of ways plants are important to people and other animals. Write on chalkboard ways people help plants. -- Explain how plants give off oxygen during photosynthesis. -- Discuss basic steps of photosynthesis. -- Ask students to consider how much oxygen they need each day and how much of that amount grass produces through photosynthesis. A person requires 360 liters/person of oxygen daily . This amount is produced by a 25 sq.ft. plot of grass. -- Measure plots of grass that represent their oxygen needs for a day. Use string to enclose a 25 sq.ft. plot.	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors <u>Materials/Preparation</u> String (20ft.) Water Baking soda Water plant/drinking glass Lamp with 75-watt bulb <u>Vocabulary</u> <table> <tr> <td>Photosynthesis</td> <td>Stomata</td> <td>Oxygen</td> </tr> <tr> <td>Chloroplasts</td> <td>Carbon dioxide</td> <td></td> </tr> <tr> <td>Chlorophyll</td> <td>Carbohydrates</td> <td></td> </tr> </table>	Photosynthesis	Stomata	Oxygen	Chloroplasts	Carbon dioxide		Chlorophyll	Carbohydrates	
Photosynthesis	Stomata	Oxygen								
Chloroplasts	Carbon dioxide									
Chlorophyll	Carbohydrates									
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Calculate the total area needed to produce the daily oxygen needed to produce the daily oxygen requirement for your entire school. -- If a grassy area is not available, use trees instead. An average tree releases enough oxygen each day to support one person-one person exhales enough carbon dioxide to support the tree.	<u>Resource Guide</u> Project Learning Tree How the Environment Works 406									

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5a
C.E.E.D. Objective: Demonstrate appreciation for natural environments.
Instructional Activity "Wildlife at the Brink"

Level D-3
Domain Interpersonal Communication
Goal Area Following Directions

Objective Identify and explore the factors affecting threatened and endangered species.

Procedures -- Provide a large piece of butcher paper and help students create a mural representing forest and water areas, complete with wildlife and habitat, but no human beings. -- Brainstorm with the class and list examples of human activity being introduced to the areas (ex. sewage plant, dam, reservoir, telephone and power lines, campground, fences, lumber mill, etc.). -- Students will make pictures - one picture for each item on the list. -- Students will place each picture on the mural in an appropriate place and then discuss the possible consequences of that activity to the wildlife (ex. mud slides, forest fires, soil erosion, water and noise pollution, dead fish, injured animals).	Instructional Environment ☒ Classroom Based ☐ School Community Based ☐ Community Based ☐ Out of Doors Materials/Preparation Butcher paper Art supplies (crayons, paint, markers, clay, plaster of paris) Vocabulary Consequences Habitat
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) -- Visit an area that shows the impact of human activity (a riverfront area shows many impacts). 407	Resource Guide Project Learning Tree The Wonder of the Wetlands 408

C.E.E.D. Instructional Activity Profile

Outdoor Awareness 5b

- A-1 The student will be able to pick up litter when directed.
- B-1 The student will be able to identify litter vs. non-litter.
- C-1 The student will increase in awareness of the difference between the decomposition of organic and non-organic materials.
- D-1 The student will explore consequences of littering and the effect on the environment.

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5b
C.E.E.D. Objective: Participate in ongoing litter prevention campaigns.
Instructional Activity "Litter Hunt"

Level A-1
Domain Interpersonal Communicator
Goal Area Following Directions

Objective Pick up litter when directed.

<u>Procedures</u> -- Provide each student with a small bag. -- Go to an outdoor spot (a park or urban area) and direct students to fill the bag with litter. -- Provide as much direction as each student needs to identify what is litter and what is not. -- Warn students <u>NOT</u> to pick up dangerous items (broken glass, needles).	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- As a preparation or follow-up activity, refer to the "Recycling" section of this book and have students identify, separate, and save recyclable materials from the trash they find.	<u>Materials/Preparation</u> Trash Litter Recycle Pair of gloves for each student
<u>Resource Guide</u> Fifty Simple Things You Can Do Sharing Nature With Children	<u>Vocabulary</u>

411

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5b
C.E.E.D. Objective: Participate in ongoing litter prevention campaigns.
Instructional Activity "Un-Natural Acts"

Level B-1
Domain Vocational
Goal Area Groundskeeping

Objective Identify litter vs. non-litter.

<u>Procedures</u> <u>The Un-Nature Trail</u> -- Prepare a nature trail by littering it with various trash items. -- Take students along the trail and identify/count the various trash items. -- Identify non-litter or natural items along the trail. -- Pick up the litter and discard appropriately. -- Warn students <u>NOT</u> to pick up dangerous items (broken glass, needles).	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors <u>Materials/Preparation</u> Various trash items (Plastic, paper, glass, metal, etc.) Pair of gloves for each student Trash bags <u>Vocabulary</u> Litter Non-litter
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- See "Extensions" Section on the previous page for an activity that can be used as a follow-up/preparation. 412	<u>Resource Guide</u> Fifty Simple Things You Can Do Sharing Nature With Children 413

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5b
C.E.E.D. Objective: Participate in ongoing litter prevention campaigns.
Instructional Activity "Bury the Sock"

Level C-1
Domain Functional Academics
Goal Area Measurement

Objective Increase awareness of the difference between the decomposition of organic and inorganic materials.

Procedures -- Take a nylon sock and collect both natural materials and litter that you find in the yard. (See "Materials") -- Make a record of your collection by sketching the sock and its contents. -- Bury the sock so that it is completely covered by dirt. -- Dig up the sock in a few months. -- Compare what has happened to the organic materials to what has happened to the glass, plastic, and metal.	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors												
	<u>Materials/Preparation</u> <table border="0"> <tr> <td>Nylon socks</td> <td>Plastic</td> </tr> <tr> <td>Leaves</td> <td>Tissue</td> </tr> <tr> <td>Plants</td> <td>Cellophane wrapper</td> </tr> <tr> <td>Grass</td> <td>Gum</td> </tr> <tr> <td>Tin cans</td> <td>Apple Core</td> </tr> <tr> <td>Glass</td> <td>Fast Food Containers</td> </tr> </table>	Nylon socks	Plastic	Leaves	Tissue	Plants	Cellophane wrapper	Grass	Gum	Tin cans	Apple Core	Glass	Fast Food Containers
	Nylon socks	Plastic											
Leaves	Tissue												
Plants	Cellophane wrapper												
Grass	Gum												
Tin cans	Apple Core												
Glass	Fast Food Containers												
<u>Vocabulary</u> Collect Time Litter Bury Change													
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Keep the sock in the ground for 1 year. Discuss the changes. 414	<u>Resource Guide</u> Hug A Tree 415												

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5b
C.E.E.D. Objective: Participate in ongoing litter prevention campaigns.
Instructional Activity "A Day's Worth of Litter"

Level C-2
Domain Vocational
Goal Area Groundskeeping

Objective Increase awareness of the difference between the decomposition of organic and inorganic materials.

<u>Procedures</u> -- Collect all the litter found in one day and sort it by biodegradable and non-biodegradable categories. (Litter collected from any of the previous activities, such as "Projects in the Parks" can be saved and then used for this activity - or organize another school grounds clean-up just for this purpose.) -- Warn students <u>NOT</u> to pick up dangerous items (broken glass, needles).	<u>Instructional Environment</u> ☐ Classroom Based ☐ School Community Based ☐ Community Based ☒ Out of Doors
	<u>Materials/Preparation</u> Containers for collecting Containers for sorting Pair of gloves for each student
	<u>Vocabulary</u> Recycle Biodegradable Non-biodegradable
<u>Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations)</u> -- Take samples of soil from different sites (lawn, woods, roadside shoulder, plowed field, garden, etc.) -- Sort soil samples according to color, weight, rocks, worms, wet/dry, etc. -- Discuss what makes some soil rich in nutrients and some soil lacking in nutrients.	<u>Resource Guide</u> Better Earth Loving Your Environment

C.E.E.D. Instructional Activity Plan

Content Areas: Outdoor Appreciation 5b
C.E.E.D. Objective: Participate in ongoing litter prevention campaigns.
Instructional Activity "A Better Earth"

Level D-1
Domain Interpersonal Communications
Goal Area Expressing Self

Objective Explore consequences of littering and the effect on the environment.

Procedures -- Discussion on waste/litter and the statistics on the amount of litter produced/ person/ year (See "Resources" for article). -- Visit a landfill/dump. -- Discuss consequences of the accumulation of litter on the environment. -- Discussion on changes in lifestyle that will help cut down on the amount of littering/waste.	Instructional Environment ☒ Classroom Based ☐ School Community Based ☒ Community Based ☒ Out of Doors Materials/Preparation Photocopies of <i>Natural Geographic</i>, 7/94 article on "Recycling" Vocabulary Recycling Landfill Consequence
Extensions/Applications/Adaptations (Vocational, Home, Alternate Populations) Earth Helpers -- Compose a bulletin board for students and parents to assist in helping the earth. Earth Helper contributions might include newspaper recycling, litter clean-up day, tree planting festival, etc. Celebrate achievement by posting the note and photo in a display on the bulletin board.	Resource Guide Better Earth <i>Natural Geographic</i> "Recycling", July, 1994

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Index 1: Recycling Instructional Activity

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"A Jar Ahead"	Recycling 1c	B-4
"Again and Again"	Recycling 1d	C-1
"B.A., M.A., Ph.D., AM and FM"	Recycling 1b	C-4
"Bag or Bin?"	Recycling 1c	B-1
"Beverage Bottles"	Recycling 1b	A-3
"Bottle Cap"	Recycling 1c	B-3
"Box It"	Recycling 1d	C-4
"Boxing Helena"	Recycling 1d	B-4
"But I Can't See Through You"	Recycling 1a	A-4
"Cans of Steel"	Recycling 1c	C-1
"Chair Man"	Recycling 1F	B-4
"Clean and Green"	Recycling 1F	A-3
"Concentration"	Recycling 1e	D-1
"Contamination"	Recycling 1b	A-1
"Contented Cows"	Recycling 1a	A-5
"Deja Vu"	Recycling 1d	B-1
"Disinfected Alternative"	Recycling 1F	A-2
"Do the Can-Can"	Recycling 1a	A-2
"Don't Breathe the Air"	Recycling 1e	D-2
"Don't Dump Here"	Recycling 1e	B-4
"Don't Have a Drink"	Recycling 1e	C-4
"Dust to Dust"	Recycling 1a	D-4
"Find that Stop"	Transportation	A-1
"Flame Out"	Recycling 1e	C-3
"Flat as a Pancake"	Recycling 1b	B-2
"Floored"	Recycling 1F	A-1
"Get on Board the Bus"	Transportation	A-2
"Glass or Plastic"	Recycling 1c	C-2
"Heap It On"	Recycling 1b	D-1
"Home and School Association"	Recycling 1c	D-1
"I Have One Word for You"	Recycling 1b	A-5
"I'm Ok, You're Not"	Recycling 1e	A-2
"I've Bin There"	42 Recycling 1c	A-2

Index 1: Recycling Instructional Activity

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"In the News"	Recycling 1a	A-1
"International Symbol"	Recycling 1e	C-1
"It's in the Bag"	Recycling 1b	B-1
"Keep a Lid On It"	Recycling 1b	B-4
"Leaf Me Alone"	Recycling 1a	D-1
"Magnetic Attraction"	Recycling 1a	B-2
"Mail Bag"	Recycling 1F	D-2
"Metal on Metal"	Recycling 1c	B-2
"Milk it for all it's worth"	Recycling 1c	B-5
"More than One way...#1"	Recycling 1F	C-1
"More than One way...#2"	Recycling 1F	C-2
"More than One way...#3"	Recycling 1F	C-3
"More than One way...#4"	Recycling 1F	C-4
"Mr.Yuck"	Recycling 1e	A-1
"Natural Resources"	Recycling 1d	D-3
"Niagara"	Recycling 1e	B-2
"Nuts"	Recycling 1a	D-2
"Old Man River"	Recycling 1e	A-4
"On the Floor"	Recycling 1F	B-1
"On the Hoof"	Recycling 1a	D-3
"On-site"	Recycling 1b	D-2
"One is the Loneliest Number"	Recycling 1a	C-2
"Out of Sight, Out of Mind"	Recycling 1e	B-3
"Paper Moon"	Recycling 1d	C-3
"Paper, Paper Everywhere"	Recycling 1a	C-3
"Pre-Owned"	Recycling 1d	D-4
"R-G-B"	Recycling 1b	C-3
"R-G-B #2"	Recycling 1c	C-3
"Rag Bag"	Recycling 1d	C-2
"Recycle-Reuse"	Recycling 1c	D-2
"Running on Empty"	Recycling 1d	A-1
"Salvation Army"	425 Recycling 1d	D-1

Index 1: Recycling Instructional Activity

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Same Old, Same Old"	Recycling 1d	B-3
"Sanitized"	Recycling 1F	B-2
"Save the Jars"	Recycling 1b	A-4
"Scrap Box"	Recycling 1d	A-4
"Scrap Paper"	Recycling 1d	A-3
"Sort It Out"	Recycling 1b	C-2
"Spray"	Recycling 1e	B-1
"Staples"	Recycling 1b	C-5
"Stick to It"	Recycling 1b	C-1
"Tell Me Why"	Recycling 1d	D-2
"The Ad Man"	Recycling 1a	B-1
"The Cut of the Cloth"	Recycling 1d	A-2
"The Emperor's New Clothes"	Recycling 1d	B-2
"The Real Thing"	Recycling 1a	A-3
"Ti-Dee Bowl"	Recycling 1F	B-3
"Time"	Recycling 1a	C-4
"To Pledge or Not to Pledge"	Recycling 1F	A-4
"Top It Off"	Recycling 1b	B-3
"Toxic Household"	Recycling 1e	D-3
"Toxic-Schmoxic"	Recycling 1e	C-2
"Trash It"	Recycling 1c	A-1
"Wearing of the Green (or Brown, or Clear)"	Recycling 1a	C-1
"White on White"	Recycling 1c	C-4
"Will It Bounce or Will It Break?"	Recycling 1a	B-3
"Wrap It Up"	Recycling 1d	C-5
"Yes I Can"	Recycling 1b	A-2
"You Make Me Sick"	Recycling 1e	A-3

Index 2: Water & Energy Efficiency Instructional Activity

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"A Close Brush"	Water & Energy	A-3
"Aeration"	Water and Energy	D-1
"Aerator"	Water & Energy	C-1
"Bottle and Dam"	Water and Energy	C-2
"Bottle and Dam"	Water and Energy	D-4
"Bottle-Up"	Water and Energy	D-2
"Dial It In"	Water & Energy	B-1
"Electric Things"	Water & Energy	A-1
"Energy Detective"	Water & Energy	D-2
"Energy Match"	Water & Energy	D-3
"Energy Savers" #1	Water & Energy	C-3
"Energy Savers" #2	Water & Energy	C-4
"Energy Seasons"	Water & Energy	A-1
"Flushed with Pride"	Water & Energy	B-3
"Get With the Program"	Water & Energy	C-3
"Go with the Flow"	Water & Energy	A-2
"I'm Cold"	Water & Energy	A-3
"I'm Hot"	Water & Energy	A-2
"In Hot Water"	Water & Energy	D-2
"Lights Out"	Water & Energy	C-2
"Meter Man"	Water & Energy	D-1
"Meter Monitor"	Water & Energy	D-1
"Open & Shut" #2	Water & Energy	B-3
"Open & Shut" #2	Water & Energy	B-4
"Plug Me In #1"	Water & Energy	A-4
"Plug Me In #2"	Water & Energy	B-1
"Plug Me In #3"	Water & Energy	B-2
"Programmer"	Water & Energy	C-4
Sealed Tight #1	Water & Energy	C-1
"Sealed Tight" #2	Water & Energy	C-2
"Shades of 'On'"	Water & Energy	C-1
"Shave and Save"	Water & Energy	A-4
"Squirt"	Water and Energy	C-3

Index 2: Water & Energy Efficiency Instructional Activity

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Sun & Shade"	Water & Energy	B-2
"Tight Squeeze"	Water and Energy	D-3
"Turn Me On--Turn Me Off"	Water & Energy	A-3
"Turn Me On--Turn Me Off " #2	Water & Energy	B-3
"Water Audit"	Water and Energy	C-4
"Wet-down, Soap-up, Rinse-off"	Water & Energy	B-1
"What a Dish"	Water & Energy	B-2
"Where Do I Turn?"	Water & Energy	A-2
"Where's the Dial?"	Water & Energy	A-4
"Where's the Water?"	Water & Energy	A-1

Index 3: Transportation Instructional Activity

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Alternatives"	Transportation 3a	D-2
"...and Don't Breathe the Air"	Transportation 3a	B-2
"Auto Audit"	Transportation 3a	D-1
"Can I Help You?"	Transportation 3b	D-1
"Carry Me Along"	Transportation 3a	A-3
"Dirty, Dirtier, Dirtiest"	Transportation 3c	C-3
"Do I Go?"	Transportation 3a	A-1
"Do You Know the Way to San Jose?"	Transportation 3b	C-4
"Exhausted"	Transportation 3c	B-4
Find That "Stop"	Transportation 3b	A-1
"Get Me to the Church on Time"	Transportation 3b	C-3
"Get On Board the Bus"	Transportation 3b	A-2
"Get On Board the El"	Transportation 3b	A-3
"Get On Board the Train"	Transportation 3b	A-4
"Going, Going, Gone"	Transportation 3a	A-2
"Grease and Oil"	Transportation 3c	B-2
"How Much is Enough?"	Transportation 3a	C-1
"I Need a Bigger Tank"	Transportation 3c	C-2
"I've Got Gas"	Transportation 3a	B-3
"Is that the Chattanooga Choo-choo?"	Transportation 3b	C-2
"Let's Get Together"	Transportation 3c	D-3
"Let's Go On the Bus"	Transportation 3b	B-1
"Let's Go On the El"	Transportation 3b	B-2
"Let's Go On the Train"	Transportation 3b	B-3
"Manual Labor"	Transportation 3c	B-3
"Parts Place"	Transportation 3c	B-1
"Push Start"	Transportation 3c	D-2
"The Nose Knows"	Transportation 3a	B-1
"Tires into Sandals"	Transportation 3c	C-1
"Transformation"	Transportation 3a	C-2
"Transportation through the Ages"	Transportation 3a	C-3
"Two-Lane Black-Top"	Transportation 3	A-4
"Who Am I" Game	Transportation 3b	C-1

Index 4: Outdoor Appreciation Instructional Activity

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"A Better Earth"	Outdoor Appreciation 5b	D-1
"A Better Earth"	Outdoor Appreciaton 5b	D-1
"A Day's Worth of Litter"	Outdoor Appreciation 5b	C-2
"A Day's Worth of Litter"	Outdoor Appreciaton 5b	C-2
"Animals - Big & Small"	Outdoor Appreciation 5a	C-3
"Bury the Sock"	Outdoor Appreciation 5b	C-1
"Bury the Sock"	Outdoor Appreciaton 5b	C-1
"Follow that Seed"	Outdoor Appreciation 5a	A-1
"Grow a Butterfly"	Outdoor Appreciation 5a	A-3
"Is There a Lot in that Lot?"	Outdoor Appreciation 5a	C-1
"Letter Writing"	Outdoor Appreciation 5a	C-4
"Life-Giving Green"	Outdoor Appreciation 5a	D-2
"Litter Hunt"	Outdoor Appreciation 5b	A-1
"Litter Hunt"	Outdoor Appreciaton 5b	A-1
"Projects in the Parks"	Outdoor Appreciation 5a	D-1
Schoolyard Safari	Outdoor Appreciation 5a	B-1
Shadow Games-Shadow Tag	Outdoor Appreciation 5a	A-4
"Spaghetti Garden"	Outdoor Appreciation 5a	B-2
"Sprouts"	Outdoor Appreciation 5a	A-2
"Terrarium"	Outdoor Appreciation 5a	C-2
"This Lunch is for the Birds"	Outdoor Appreciation 5a	B-3
"Un-Natural Acts"	Outdoor Appreciation 5b	B-1
"Un-Natural Acts"	Outdoor Appreciaton 5b	B-1
"Un-Natural Scavenger Hunt"	Outdoor Appreciation 5a	B-4
"Wildlife at the Brink"	Outdoor Appreciation 5a	D-3

Index 5: Recycling Instructional Activity

Domain: Vocational

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"In the News"	Recycling 1a	A-1
"The Ad Man"	Recycling 1a	B-1
"Magnetic Attraction"	Recycling 1a	B-2
"Will It Bounce or Will It Break?"	Recycling 1a	B-3
"Wearing of the Green (or Brown, or Clear)"	Recycling 1a	C-1
"One is the Loneliest Number"	Recycling 1a	C-2
"Paper, Paper Everywhere"	Recycling 1a	C-3
"Time"	Recycling 1a	C-4
"Leaf Me Alone"	Recycling 1a	D-1
"Dust to Dust"	Recycling 1a	D-4
"Contamination"	Recycling 1b	A-1
"Stick to It"	Recycling 1b	C-1
"Sort It Out"	Recycling 1b	C-2
"R-G-B"	Recycling 1b	C-3
"B.A., M.A., Ph.D., AM and FM"	Recycling 1b	C-4
"Cans of Steel"	Recycling 1c	C-1
"Glass or Plastic"	Recycling 1c	C-2
"R-G-B #2"	Recycling 1c	C-3
"White on White"	Recycling 1c	C-4
"Home and School Association"	Recycling 1c	D-1
"Recycle-Reuse"	Recycling 1c	D-2
"The Cut of the Cloth"	Recycling 1d	A-2
"Scrap Paper"	Recycling 1d	A-3
"Scrap Box"	Recycling 1d	A-4
"Deja Vu"	Recycling 1d	B-1
"The Emperor's New Clothes"	Recycling 1d	B-2
"Same Old, Same Old"	Recycling 1d	B-3
"Boxing Helena"	Recycling 1d	B-4
"Again and Again"	Recycling 1d	C-1
"Paper Moon"	Recycling 1d	C-3
"Box It"	Recycling 1d	C-4
"Wrap It Up"	Recycling 1d	C-5
"Tell Me Why"	Recycling 1d	D-2

Index 5: Recycling Instructional Activity

Domain: Domestic Maintenance

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Do the Can-Can"	Recycling 1a	A-2
"The Real Thing"	Recycling 1a	A-3
"But I Can't See Through You"	Recycling 1a	A-4
"Contented Cows"	Recycling 1a	A-5
"Nuts"	Recycling 1a	D-2
"On the Hoof"	Recycling 1a	D-3
"Yes I Can"	Recycling 1b	A-2
"Beverage Bottles"	Recycling 1b	A-3
"Save the Jars"	Recycling 1b	A-4
"I Have One Word for You"	Recycling 1b	A-5
"It's in the Bag"	Recycling 1b	B-1
"Flat as a Pancake"	Recycling 1b	B-2
"Top It Off"	Recycling 1b	B-3
"Keep a Lid On It"	Recycling 1b	B-4
"Staples"	Recycling 1b	C-5
"Heap It On"	Recycling 1b	D-1
"On-site"	Recycling 1b	D-2
"Trash It"	Recycling 1c	A-1
"I've Bin There"	Recycling 1c	A-2
"Bag or Bin?"	Recycling 1c	B-1
"Metal on Metal"	Recycling 1c	B-2
"Bottle Cap"	Recycling 1c	B-3
"A Jar Ahead"	Recycling 1c	B-4
"Milk it for all it's worth"	Recycling 1c	B-5
"Rag Bag"	Recycling 1d	C-2
"Mr. Yuck"	Recycling 1e	A-1
"I'm Ok, You're Not"	Recycling 1e	A-2
"You Make Me Sick"	Recycling 1e	A-3
"Old Man River"	Recycling 1e	A-4
"Spray"	Recycling 1e	B-1
"Niagara"	Recycling 1e	B-2
"Out of Sight, Out of Mind"	Recycling 1e	B-3
"Don't Dump Here"	Recycling 1e	B-4

Index 5: Recycling Instructional Activity

Domain: Domestic Maintenance

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"International Symbol"	Recycling 1e	C-1
"Toxic-Schmoxic"	Recycling 1e	C-2
"Flame Out"	Recycling 1e	C-3
"Don't Have a Drink"	Recycling 1e	C-4
"More than One way...#1"	Recycling 1F	C-1
"More than One way...#2"	Recycling 1F	C-2
"More than One way...#3"	Recycling 1F	C-3
"More than One way...#4"	Recycling 1F	C-4

Index 5: Recycling Instructional Activity

Domain: Vocational

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Natural Resources"	Recycling 1d	D-3
"Pre-Owned"	Recycling 1d	D-4
"On the Floor"	Recycling 1F	B-1
"Sanitized"	Recycling 1F	B-2
"Ti-Dee Bowl"	Recycling 1F	B-3
"Chair Man"	Recycling 1F	B-4

Index 5: Recycling Instructional Activity

Domain: Functional Academics

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Running on Empty"	Recycling 1d	A-1
"Salvation Army"	Recycling 1d	D-1
"Concentration"	Recycling 1e	D-1
"Don't Breathe the Air"	Recycling 1e	D-2
"Floored"	Recycling 1F	A-1
"Disinfected Alternative"	Recycling 1F	A-2
"Clean and Green"	Recycling 1F	A-3
"To Pledge or Not to Pledge"	Recycling 1F	A-4

Index 6: Water & Energy Efficiency Instructional Activity

Domain: Domestic Maintenance

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Bottle and Dam"	Water and Energy Efficiency 2a	C-2
"Squirt"	Water and Energy Efficiency 2a	C-3
"Water Audit"	Water and Energy Efficiency 2a	C-4
"Aeration"	Water and Energy Efficiency 2a	D-1
"Bottle-Up"	Water and Energy Efficiency 2a	D-2
"Tight Squeeze"	Water and Energy Efficiency 2a	D-3
"Bottle and Dam"	Water and Energy Efficiency 2a	D-4
"Go with the Flow"	Water & Energy Efficiency 2a	A-2
"What a Dish"	Water & Energy Efficiency 2a	B-2
"Aerator"	Water & Energy Efficiency 2a	C-1
"Electric Things"	Water & Energy Efficiency 2b	A-1
"Where Do I Turn?"	Water & Energy Efficiency 2b	A-2
"Turn Me On--Turn Me Off"	Water & Energy Efficiency 2b	A-3
"Plug Me In #1"	Water & Energy Efficiency 2b	A-4
"Plug Me In #2"	Water & Energy Efficiency 2b	B-1
"Plug Me In #3"	Water & Energy Efficiency 2b	B-2
"Turn Me On--Turn Me Off " #2	Water & Energy Efficiency 2b	B-3
"Shades of 'On'"	Water & Energy Efficiency 2b	C-1
"Lights Out"	Water & Energy Efficiency 2b	C-2
"Energy Savers" #1	Water & Energy Efficiency 2b	C-3
"Energy Savers" #2	Water & Energy Efficiency 2b	C-4
"Meter Man"	Water & Energy Efficiency 2b	D-1
"Energy Detective"	Water & Energy Efficiency 2b	D-2
"Energy Match"	Water & Energy Efficiency 2b	D-3
"Dial It In"	Water & Energy Efficiency 2c	B-1
"Sun & Shade"	Water & Energy Efficiency 2c	B-2
"Open & Shut" #2	Water & Energy Efficiency 2c	B-3
"Open & Shut" #2	Water & Energy Efficiency 2c	B-4
Sealed Tight #1	Water & Energy Efficiency 2c	C-1
"Sealed Tight" #2	Water & Energy Efficiency 2c	C-2
"Get With the Program"	Water & Energy Efficiency 2c	C-3
"Programmer"	Water & Energy Efficiency 2c	C-4
"Meter Monitor"	Water & Energy Efficiency 2c	D-1

Index 6: Water & Energy Efficiency Instructional Activity

Domain: Personal Maintenance

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Where's the Water?"	Water & Energy Efficiency 2a	A-1
"A Close Brush"	Water & Energy Efficiency 2a	A-3
"Shave and Save"	Water & Energy Efficiency 2a	A-4
"Wet-down, Soap-up, Rinse-off"	Water & Energy Efficiency 2a	B-1
"Flushed with Pride"	Water & Energy Efficiency 2a	B-3

Index 6: Water & Energy Efficiency Instructional Activity

Domain: Domestic Maintenance

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"In Hot Water"	Water & Energy Efficiency 2c	D-2

Index 6: Water & Energy Efficiency Instructional Activity

Domain: Functional Academics

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"I'm Hot"	Water & Energy Efficiency 2c	A-2
"I'm Cold"	Water & Energy Efficiency 2c	A-3
"Where's the Dial?"	Water & Energy Efficiency 2c	A-4

Index 7: Transportation Instructional Activity

Domain: General Community Functioning

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Let's Get Together"	Transportation 3c	D-3

Index 7: Transportation Instructional Activity

Domain: General Community Functioning

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Do I Go?"	Transportation 3a	A-1
"Going, Going, Gone"	Transportation 3a	A-2
"Carry Me Along"	Transportation 3a	A-3
"Two-Lane Black-Top"	Transportation 3a	A-4
"The Nose Knows"	Transportation 3a	B-1
"...and Don't Breathe the Air"	Transportation 3a	B-2
"I've Got Gas"	Transportation 3a	B-3
"How Much is Enough?"	Transportation 3a	C-1
"Transformation"	Transportation 3a	C-2
"Transportation through the Ages"	Transportation 3a	C-3
"Auto Audit"	Transportation 3a	D-1
"Alternatives"	Transportation 3a	D-2
Find That "Stop"	Transportation 3b	A-1
"Get On Board the Bus"	Transportation 3b	A-2
"Get On Board the El"	Transportation 3b	A-3
"Get On Board the Train"	Transportation 3b	A-4
"Let's Go On the Bus"	Transportation 3b	B-1
"Let's Go On the El"	Transportation 3b	B-2
"Let's Go On the Train"	Transportation 3b	B-3
"Who Am I" Game	Transportation 3b	C-1
"Is that the Chattanooga Choo-choo?"	Transportation 3b	C-2
"Get Me to the Church on Time"	Transportation 3b	C-3
"Do You Know the Way to San Jose?"	Transportation 3b	C-4
"Can I Help You?"	Transportation 3b	D-1
"Parts Place"	Transportation 3c	B-1
"Grease and Oil"	Transportation 3c	B-2
"Manual Labor"	Transportation 3c	B-3
"Exhausted"	Transportation 3c	B-4
"Tires into Sandals"	Transportation 3c	C-1
"I Need a Bigger Tank"	Transportation 3c	C-2
"Dirty, Dirtier, Dirtiest"	Transportation 3c	C-3
"You Can Bank on It"	Transportation 3c	D-1
"Push Start"	Transportation 3c	D-2

Index 8: Outdoor Appreciation Instructional Activity

Domain: Vocational

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Un-Natural Acts"	Outdoor Appreciation 5b	B-1
"A Day's Worth of Litter"	Outdoor Appreciation 5b	C-2
"Un-Natural Acts"	Outdoor Appreciation 5b	B-1
"A Day's Worth of Litter"	Outdoor Appreciation 5b	C-2

Index 8: Outdoor Appreciation Instructional Activity

Domain: Interpersonal Communications

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"A Better Earth"	Outdoor Appreciation 5b	D-1

Index 8: Outdoor Appreciation Instructional Activity

Domain: Domestic Maintenance

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Sprouts"	Outdoor Appreciation 5a	A-2
"Spaghetti Garden"	Outdoor Appreciation 5a	B-2
"Terrarium"	Outdoor Appreciation 5a	C-2

Index 8: Outdoor Appreciation Instructional Activity

Domain: Recreation and Leisure

<u>Instructional Activity</u>	<u>Content Areas</u>	<u>Level</u>
"Follow that Seed"	Outdoor Appreciation 5a	A-1